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Transit Rider's Champion

The Canadian Transit Association, representing 31 major transit operators and 71 manufacturers of transport equipment, has a new president: Sigurdur Sigmundson, manager of B. C. Electric Co.'s transit operations. He will now speak for an industry which last year grossed $126 millions, carrying 1,261 million passengers over 226 million miles. Personality Sketch, page 6.

THE NATION'S BUSINESS

Put A Price Tag On Every Promise

In this summer heatwave of election campaigning, the heady draughts of political success or hopes of success won't do very much to tell the voter what the moon is going to cost. But he should remember and keep remembering that he is the one who will be paying the bills. Out of his pocket all the money must come. Governments cannot make it or earn it.

If the voter is told he really needs and wants bigger old age pensions, higher farm subsidies, or a new postoffice, he has a perfect right to know exactly what each item will cost, how much more it will add to his tax bill.

And if he is told that he will get all this and tax cuts too, then he should also ask very bluntly: Where and How?

Sweeping and general promises of retrenchment should likewise carry a price tag. Substantial economies could be made by all governments in this country. Long periods of prosperity encourage the fat to grow both in public and private business. But in this day and age we can hardly expect whopping tax-slashes. We might as well face the grim fact that we are fighting a war, mostly a cold one it is true, but terribly expensive nevertheless in complicated and massive weapons and these weapons become obsolete in a hurry. A $500,000 plane today may not be worth $5 as a weapon a year or two hence. For a long time to come the free world must carry a tremendous burden for defense.

In this guns and butter business, we have an example close at hand. A year ago Candidate Eisenhower was promising the U. S. substantial tax cuts and a balanced budget. Today President Eisenhower is finding that such promises are much easier made than carried out.

But we repeat this fundamental principle: For each of the promises with which we will be deluged, we must ask, "What will it cost us?" It's our money they want to play with.

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We Need Air Cargo Now

We don't like the report that the Government is going to hold up its decision on air cargo until after the election.

This is a very important matter for business. The decision need not and should not have any "political" angles. There is no good excuse whatever for fiddling any longer.

Canadian Pacific Airlines has applied for permission to start an exclusive air cargo service in Canada. Under its service business firms could reserve cargo space for their deliveries just the same as a passenger. No such service now exists. Trans-Canada takes some air cargo on an "if we have room for it" basis. But TCA is obliged to take passengers, mail and air express first.

Obviously for a business to switch over to dependence on air delivery, certainty is essential and certainty alone justifies the extra cost.

Air delivery is of particular importance to a country with geography like ours and where there are such vast distances between production centres and important markets, it can work tremendous changes in business patterns.

In air delivery Canada is lagging far, far behind the United States which already has some 20 transcontinental all-cargo scheduled flights every day in addition to numerous charter and tributary operations. If we get big cargo planes into operation here, there will be advantages for the development of the far north. The economies of the big machines, we are told, would permit a 15-20% cut in present northern air freight rates.

It is not our concern which line wins the battle. It is very much our concern that somebody be permitted to get going promptly on the kind of air cargo service that will make it desirable and possible for business to adopt new practices and which will breed constantly more air cargo business.

The firm that goes on an air cargo basis will oblige its competitors to do likewise because 87-hour deliveries won't compete with 14-hour deliveries. And in many commodities the delivery cost factor is hardly consequential.

The Air Transport Board has made its finding and recommendation. The stuff is there for the Cabinet to look at and make up its mind. Let's have a decision now.

* * * *

No Painless Way Out

The United States has got itself—and the rest of the world—into an appalling jam by its accumulation of agricultural surpluses at ridiculously high support prices. The political pressure of farmers has succeeded in making the state give them prices far above what consumers are prepared to pay. The evil results start with the exclusion of foreign products which are produced and sold at competitive prices. Canada is already affected by the quota on dairy products and now oats are threatened.

But this is only the beginning. The threat which immediately follows is that the U. S., desperate to get rid of the surpluses, will try to pump them into other markets at cut rate prices. The most prominent measure now under discussion in Washington (as reported on this page) does—to do it justice—seek to avoid this result. But it involves a host of other difficulties. The fact is that the excessive accumulation of government-owned surpluses creates a situation from which there is no painless way out.

Canadians are justified in feeling critical of the muddle the United States has got itself into. It is only fair, however, to remember that President Eisenhower is, in this matter the unwilling heir to the consequences of long-established Democratic policies. And Canadians certainly have no reason to feel self-righteous about agricultural protectionism and subsidies. The best that can be said for our price support policies is that they may have been more moderate than the U. S. policies. But we are certainly on the same dangerous path and in this election year we could easily shove ourselves still further along.

Ontario Studies Tax On Natural Resources

Rising Trend of Provincial Expenditures Behind Move Which May Bring New Form of Tax On Mines and Forest Products Closer To Source

The Ontario Government may soon be ready to tap its extractive industries for extra revenue.

The political decision — to impose a natural resources levy—has not yet been made. But there is a growing conviction among Government officials that it is coming.

Premier Frost, who is also Provincial Treasurer, is understood to share this conviction and has ordered the necessary studies. They began nearly a year ago when it first became evident that Ontario may soon need much more revenue. The study was stepped up just before Mr. Frost left for the Coronation. A complete report is to be laid before him within the next few weeks.

It is understood the report urges either the adoption of a provincial sales tax, or a fresh imposition on users of the natural resources. Everything in the Premier's makeup, and certainly in the political thinking of his cabinet, leads to an almost automatic rejection of the sales tax idea.

The natural resources tax is drawing more attention.

"A mere pittance — that's all we're getting from our resources and that's all we've ever received" is the way one government official felt about it. This feeling, that Ontario should be getting more back directly from her resources, has been growing steadily since the war.

Ontario's Position

Why should Ontario of all provinces be feeling the pinch?

Ontario showed a surplus of more than $50 millions in last year's budget. This, Premier Frost's critics say, came from heavy capital payments. About $8.5 million more than was budgeted for went into the sinking fund; special capital grants to hospitals totaled another $8.5 million and the universities received "surprise capital grants"—quite apart from maintenance and construction grants — of $1.9 million.

A Highway Reserve Account was created and $30 millions put into it. Premier Frost says this is an entirely new item in that for the first time the Legislature votes the money. His critics say the money was just removed from the capital expenditures column to help reduce an "embarrassingly huge surplus."

To smaller degrees the same thing happened in years previous, only the "extra" surplus generally went into the sinking fund.

Despite this, the provincial debt has been growing. Net increase for year ending 1949 was $16.9 millions, for 1950 an additional $25.1 millions, another $12.7 millions in 1951, $33 millions in 1952 and $78.5 additional millions in 1952 fiscal year. The premier has applied the Highway Reserve Account item of $30 millions and another item termed "Corporation Tax Suspense Account" of $16 millions against this 1952 net increase to reduce it to $46 millions.

Today the net provincial debt stands at better than $633 millions by the Premier's own estimate.

Although he says in public the debt increase is merely a good sign of healthy expansion, the Premier is essentially conservative in fiscal matters and would like to get the net debt down. But he feels too that those who will use the assets produced by today's capital expenditures should help pay for them, and that it doesn't matter anyway because the province is doing well now and should continue to do so.

Expenditures Ahead

The $50 millions of surplus are items of hard, cold expenses, likely to be repeated. The hospitals grants will be reflected in, or assimilated into, greater ordinary expenditures for hospitals. Health Minister MacKinnon Phillips for six months has been studying other systems and Ontario's hospital grant program also is slated for an overhaul. This will involve more money undoubtedly but provincial authorities naturally are sitting

(Continued on page 3, col. 1)

Hope New Jobs For Miners As Dosco Shuts N.S. Pit

MONTREAL (Staff) — Cape Breton's economic picture has received another jolt, with the announcement by Dominion Coal Co. that its No. 24 Colliery will cease operations July 31 and will be abandoned.

The colliery, which has operated at a loss since 1935, employs about 400 men. But there was a brighter side.

H. C. M. Gordon, Dosco vice-president, said some of the working force will be employed in moving the large quantity of materials and equipment from the mine workings.

Furthermore, the balance of the mine's regular employees will be given work at other Glace Bay area collieries "as far as that is possible," he said.

The No. 2 Colliery lost $343,000 on operations last year, equal to $2.04 per net ton of coal produced. To May 31 this year, it lost $2.81 per net ton hoisted.

"While it is the policy of Dominion Coal Co. to keep unprofitable mines in operation as long as there is any hope of their operations becoming profitable and as long as the over-all operations of the company are successful," Mr. Gordon explained, "physical conditions in No. 24 Colliery are such that there is little or no hope of the mine's performance improving."

High Production Costs

He said the average height of coal at the working face is only 32 inches and that this thinness in the seam, coupled with the large amount of rock removal necessary, means extremely high production costs.

"There is no possible change in working methods which could make the operation a paying one, nor is complete mechanization of the operation possible."

This latest move follows close on the heels of the company's decision to close down its big No. 1-B Colliery until probably mid-August for mechanization. The No. 1-B shutdown put about 1,200 miners out of work and swelled the number of unemployed in the Sydney area to almost 4,000.

It's estimated that at least 400 fewer men will be needed at No. 1-B after the mechanization program has been completed. No estimate has been given as to how many of the workers at No. 24 will be given other work.

1953 Survey Of Industrials Just Off Press

Earnings of a good many companies improved last year, but the combined total was down from the 1951 level . . . by industrial groups, oils, merchandising, public utilities, finance companies and milling increased their net profit . . . other groups suffered a reduction in earnings despite increases in business volume.

The facts, the record of an active business year of some 1,600 companies are packaged in easy reference form in The Financial Post Survey of Industrials, 1953 edition, just off the press.

Companies reported on include a wide variety of industries: manufacturing, public utilities, pulp and paper, steamships, merchandising, iron and steel, investment trusts and mutual funds, banks trust and loan and transportation companies. Company reviews in this volume include earnings statements and balance sheets, working capital position, dividend history, funded debt, addresses, subsidiaries and directors.

As in previous editions, an eight-year record of the price range on Canadian industrial stocks is included, to help keep the Survey of Industrials in the front rank among valued Canadian business reference journals.

Published by The Financial Post, 481 University Ave., Toronto 2, the 1953 volume is available at $3 a copy.

PRICES

Industrial chemicals—sulphuric acid, chlorine and ammonia—are moving up around 7% in price. The cost structure of almost every manufactured product will be affected directly or indirectly.

Chemical fertilizers are in for modest price hikes reflecting higher prices for sulphuric acid and ammonia. Already superphosphate has jumped $1 a ton in U. S. reflecting the acid price rise there earlier.

Crude oil rise which has become general in all U. S. fields but California (where prices were raised in March) is almost certain to be extended to Canadian produced oil. A 25c a barrel hike here could tack an additional 1c a gallon on gasoline, a smaller amount on heating oils.

Automobiles: Kaiser - Fraser of Canada has cut prices $100 and $125 on its Henry J. Corsair and Henry J. Corsair DeLuxe models. Corsair is now $1,853 f.o.b., Windsor.

Many Prices Up When Hike In Chemicals Hits

By W. L. DACK

A series of price boosts in basic chemicals is going to affect the cost structure — directly or indirectly — of practically every manufactured product in Canada.

Coming on top of other rising costs this will mean definite price hoists on a broad range of products; tighter operating squeezes, narrowing profits in other lines where sharply competitive market conditions render price rises virtually impossible at the moment.

Sulphuric acid, chlorine, ammonia are three of the heavy-volume chemicals moving up. They'll bring about price rises in practically all chemical fertiliz-

(Continued on page 3, col. 3)

Ottawa Keeps Close Watch On Bank, Consumer Credit

OTTAWA (Staff) — Expanding credit by the banks, as well as by finance companies and retail traders, is getting a critical look from financial authorities here.

The new figures show that consumer credit in the first quarter of this year financed one third of retail sales. This is a higher proportion than in any period of last year, although the first quarter is normally the lowest for credit sales.

Last year, 69% of all retail sales were for cash in the first quarter of the year. In all the other quarters the proportion was 66%, with fractional differences. In the first quarter of this year, cash sales had dropped to 66.9% of the total sales.

Compared with the first quarter of last year, cash sales were up 5%, installment sales up 38%, and charge sales up 6%.

Since the proportion of consumer credit is usually highest in the second quarter of the year — mainly because that is when most automobiles are sold — it is probable that by this time sales on credit are running above one third of all sales.

Current loans by the chartered banks to the public at the end of April stood at $3,372 millions, the highest level ever. The curve also appeared to be headed upward. So-called "call loans" stood at another $152 millions, highest in recent years with the exception of last December.

Canadian deposits with the chartered banks had also reached a new high at $8,618 millions. The cash ratio (i.e. percentage of cash to deposits) was at 10.1% which is the same as the end of 1952.

Position of Bank Credit

Some expansion of bank credit would follow naturally on the increase in deposits, the growth of the population and the general expansion of the economy. Financial authorities here were not prepared to say flatly that bank lending had gone beyond that point. But they had doubts about it. Credit expansion, they say, has gone rather farther in Canada than it has in the United States; and it's questionable whether it has gone beyond what is sound even there.

It is understood that Graham Towers, Governor of the Bank of Canada, recently had one of his periodic meetings with the chartered banks, and this may have been one of the subjects under discussion. But the trend of these talks is never officially revealed unless it leads to a definite agreement such as the credit restraints agreed in February 1951 and raised last year.

Obviously no such firm agreement was reached this time. But it is quite possible that a note of caution was sounded.

The fear felt by some about overextended bank and consumer credit is that it might make it unnecessarily hard to adjust to a period in which economic expansion started to slow up. It is the pulling-back that is painful after overextension.

Consumer Credit

The new consumer credit figures give a hint of this. They show an increase in customers' accounts receivable, both in re-

(Continued on page 3, col. 2)

Rayon Imports Cut Output Of Courtaulds, Celanese

A rising flood of rayon imports from U. S. and Europe is hitting heavily at the domestic industry.

The result, Courtaulds Ltd. has closed its Cornwall, Ont., staple fibre plant until Aug. 4 and has cut back operations 25% at its filament yarn plant.

Canadian Celanese Ltd. — the other big producer — which operates plants at Drummondville and Sorel, Que., has been forced to cut operations 20-30%. Further cuts are probable unless sales trend improves. Plants are being closed from June 23 to July 1 in addition to the regular two weeks' holidays which come later in July.

"There is a limit to how much goods we can carry," a rayon official told The Post this week. "Our warehouse space is already well filled."

The industry estimates rayon imports in all forms are currently coming into Canada at an annual rate of $30-$40 millions. Imports of yarns in the first three months at 1,327,393 lb. were more than triple the quantity brought in in same period last year. Staple fibre imports in the same period jumped from 316410 to 2,399,608 lb. Woven rayon fabrics imports were doubled at 2,912,863 lb.

"We have been meeting the price cuts of a U. S. industry that has a market about 12½ times the size of ours," the rayon manufacturer stated. "Now with, reopening of ocean navigation and saturation of the European market U. K., Dutch, Swiss, Austrian products have started concentrating on our small market."

In addition increased imports of made-up goods from U. S. have been cutting the demand from the domestic clothing industry.

That Big U.S. Farm Surplus

What It Can Do To Canada and World Trade

For a report on Western Canada's crop outlook, the impact of the big wheat carryovers, and the possible effect on prices, see p. 25.

WASHINGTON (Staff) — Surplus farm products on the hands of the U. S. Government will amount to at least $5 billions before this year is out. Canadian observers here, like all other countries with agricultural goods to export, are deeply concerned about what the U. S. will do to liquidate these colossal stocks.

The U. S. policy of rigid, high-price supports for farm products shows up more and more clearly as the immediate crux of the foreign trade tangle.

It has already driven the President into open violation of GATT by the use of his power to keep out imports on price-supported dairy products (The Financial Post, June 13).

Now it is in danger of upsetting trade in agricultural products half around the world, as the U. S. tries to get rid of its huge surpluses.

The U. S. Tariff Commission will hold public hearings on July 7, looking toward a restriction of imports of oats. At stake are Canadian sales which amounted to 58 million bushels in the crop year 1951-52 and another 42½ millions up to April of this year. This is 91% of our oats exports. Canadian oats are being sold at just over 70 cents. The U. S. support price as from the beginning of July averages around 80 cents.

U. S. Exports Drop

While the U. S. Government keeps out foreign farm products from its own market, it is also losing its own export markets. Agricultural exports from United States in the present year will be something under $5 billions. This is $1 billion, or 25%, below the previous year. And the $1 billion drop in exports corresponds almost exactly to the drop in farm incomes. This year they will be about $13 billions, compared with last year's $14 billions.

Meanwhile, the farm products which no one else will buy at the high support prices are bulging out of the available U. S. stores. Wheat is being poured into the holds of laid-up ships. The Government has had to allow farmers in the southwest to store it in the open on their farms. Butter is being fed to the troops and distributed for school lunches. Parents here who cannot afford butter for themselves find that their children are being stuffed with as much of it as they can eat at school.

But still the surpluses pile up. The Government spent more than $100 millions on storage last year. This year it will be higher.

Here is the latest score, as at April 30, of what the U. S. Government holds. Part of it is already government-owned; the rest is officially still in the producers' hands but the Government has made loans on it. Since the crops under loan are almost certain to end up in the Government's hands,

(Continued on page 3, col. 4)

Big Uranium Find In North Ontario

Peach Uranium Discovery, Midway Between Sault Ste. Marie and Sudbury, Holds Promise Of Major Development — First Drilling News

For map showing details of drill holes on Eastern Canada's new uranium find, see p. 7.

By GORDON M. GRANT

After five years of intensive exploration Eastern Canada seems to have emerged with the prize of a major uranium find.

It is located right on Ontario's "main street of mining" — about midway between Sault Ste. Marie and Sudbury near roads and railways which can spell low cost mining.

Well outlined by diamond drilling, the deposit can already be rated as second only to that of Gunnar Gold Mines in terms of indicated tonnage and contained dollar value of uranium insofar as direct financing by the public is concerned. And the occurrence is still wide open for expansion.

The uranium-bearing mineral has been identified by both the University of British Columbia and University of Toronto as finely disseminated pitchblende. A heavy pyrite content of the ore may make possible uranium recovery by auto-oxidation acid leach process.

The big close-to-home large-scale uranium occurrence is believed to have important implications for the atomic program, due to its location in the heartland of North America. The strike has already been the scene of a big staking rush (The Financial Post, June 20).

Peach Uranium, the discovery company, was formed and financed by Joseph Hirshhorn, of Toronto and New York, with an authorized capital of only 100,000 authorized and issued par shares. Bid $1 at the first of the month with no trading, the stock was $17 at the middle of the month; this week it was $28 bid.

A closely-kept secret for many weeks because hectic claim-staking by the principals was still proceeding, the discovery of Peach Uranium & Metal Mining has now been proben by 32 diamond drill holes to a slope depth of 420 ft. No less than 1.3 million tons of ore is indicated by widely-spaced holes averaging $17.40 a ton in uranium oxide over an average width or thickness of 8.8 ft. Ore measure runs 2,640 tons to the vertical foot. The consistent assays from individual drill holes are a feature. There are also low accompanying values in gold and silver.

Near Algoma Mills

The occurrence (in southeastern Long twp., four miles east of Algoma Mills), is regarded by the management as wide open on strike both to the east and west as well as at depth. With Preston East Dome reliably reported to have made discoveries both to east and west of the 3½-mile strike length owned by Peach, chances of the latter's picking up other ore bodies on its own ground are regarded as encouraging.

Altogether, it may be in the cards that a big new uranium camp is opening up as well as a substantial new mine.

Unlike most exploratory projects, deeper Peach holes were drilled first. This is due to the fact that the ore body dips flatly southward at an angle of about 15 degrees and more information was desired up dip from shallower holes. The drilling suggests possibilities of a very large footage of continuous ore.

First work consisted of a tier of 19 holes spaced at roughly

(Continued on page 7, column 1)

Inside News

Molecular Revolution

The molecular manipulators are betting $200 millions on Canada's future in a progressive march toward raw material self-sufficiency. The Financial Post takes a searching look at the new Canadian chemical picture and the pattern for the future in a feature section (pp. 29 to 44).

Hand Arctic to U. S.?

Will Canada let United States take over the Arctic? With defense developments forcing the pace, our claim to the land under the northern lights is being tested more seriously than ever before. Why Canada has to act, the problems and possibilities north (p. 15).

New British Confidence

The spirit of Coronation is still abroad in London; it has inspired a new feeling of confidence in the people of Britain. Adelphi reports on the current British scene in London Calling (p. 28).

Time for Buying

How to take advantage of a weak spell in the market is shown in recent transactions of the MacNab account. The sells, buys, plans. Managed Investment (p. 5).

Call of the North

What are the real opportunities of Canada's vast virgin lands to the north—and how can we best go about development and utilization? Canadians offer suggestions in The Question (p. 11).

Money Morgues

The business library has become a vital unit of business. Why they're important, who's using them and how (p. 8).

Ontario Lawyers Set Up Fund To 'Insure' Funds In Trust

Ontario's lawyers have begun this month to make their first annual contributions to a newly established fund designed to provide some degree of compensation when a client suffers actual monetary loss as the direct result of dishonesty of a solicitor.

A few days after members of the Bar of Ontario received notice of the initial annual levy of $10, police issued a warrant for the arrest of Toronto lawyer Walter B. Reid on a charge of theft of a total of $33,000 from his law firm, a gold mining company and three estates for whom he was solicitor.

Police said last Tuesday, a week after the warrant was issued, that Reid had not been located.

The date on which the new compensation fund will come into effect has not yet been set but it is expected to be sometime next fall, Secretary W. Earl Smith of the Law Society of Upper Canada told The Financial Post. No grants will be made for losses discovered before the fund goes into operation.

The new Ontario fund is modelled on the compensation fund administered by the Law Society in England, introduced there by the Solicitors' Act, 1941. Solicitors' clerks, however, are not covered by the Ontario fund, as they are in England.

Similar funds exist in New Zealand, considered to be the pioneer country in this field, and in Australia. In Canada, compensation funds operate in Alberta, Saskatchewan and Manitoba.

A special committee set up by the Law Society of Upper Canada in 1933 to investigate the subject of defaulting solicitors advised against the establishment of insurance or a scheme of guarantee or bonding. Among the committee's reasons for rejecting any such proposal were "that honest solicitors would pay for the defaults of the dishonest" and that it "would be wholly inconsistent with the honorable and independent position occupied by the solicitors of the province."

A second committee, under the chairmanship of J. J. Robinette, Q.C., was appointed in September, 1951. In its report of Jan. 7, 1953, this committee recommended establishment of a compensation fund but stated that an insurance policy did not seem practicable at present.

A client wishing to bond an Ontario lawyer may now make application to a bonding company, which would consider any such case on its individual merits. A spokesman for United States Fidelity & Guaranty Co., which writes the largest annual volume of guarantee insurance in Canada, told The Financial Post that he could recall no instance in which a solicitor had been bonded by a client.

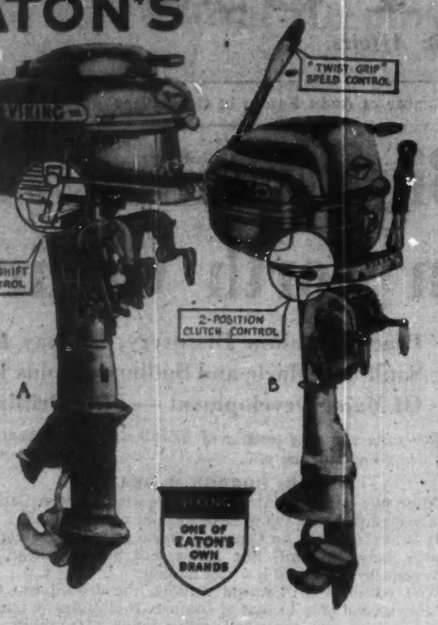
New Can. Aviation Electronics Plant

MONTREAL (Staff)—Canadian Aviation Electronics Ltd. has started construction of a new Montreal plant at Cote de Liesse Road.

The addition is scheduled for completion in November and will include the latest engineering, research and manufacturing facilities for all the company's divisions. It will increase productive capacity and expand engineering facilities greatly.

Contractor is Serrentino Construction Co. of Montreal.

EATON'S



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CONSTRUCTION TRENDS By HARLEY POTTER

Should Construction Firms Sell Securities To Public?

Big-job construction volume is growing so fast that to handle it all and keep outside competitors from taking the business, big Canadian construction firms may have to sell securities to the public.

That is something few of them do. Most are family owned and built on the drive and managerial ability of individuals.

But a combined prophecy and warning came from President John Flood of the Canadian Construction Association at a regional meeting at Muskoka, Ont.

He estimates that if construction volume grows as fast as it has in postwar years, by 1960 it will equal $8 billions a year at today's prices. This figure may sound fantastic, and it does depend on a lot of economic factors. But, he argues, so did today's volume seem fantastic in 1946.

If his hedged forecast comes true, where will all the money come from to handle the big jobs —capital for the contractors, that is? Already, some feel the pinch.

One answer may be sale of securities, Flood suggests. Another one may be "closer links with our banking institutions."

One industry leader—not Flood —has made a bitter prediction, for what it is worth, that U.S. owned or backed companies are almost sure to get most Seaway work. They have advantages in financing, he claims. People who agree with him think Canadian banks are too conservative.

Actually, Canadian banks do help bankroll big contractors for big jobs. But the Bank Act won't let them take a lien on construction machinery, as U.S. banks may do. They can and do loan, however, on other security or depend mainly on the contractor's general good standing and on his contracts.

Flood had a good word though for firms from across the border: they have "caused Canadian management to sharpen their pencils practically up to the eraser to keep the competitive edge they have from being intimately familiar with Canadian labor, material and climatic conditions . . . The construction buying public has gained considerably and will undoubtedly continue to do so in the future."

He also urged greater use of the "joint venture," where several construction firms pool resources on a big job.

This practice is on the increase; an example is eight firms who participate in Kitimat Constructors, handling the Kitimat part of the giant B. C. aluminum development.

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Some Trades Price Selves Out of Work

President Flood had some warnings on labor productivity, housing and highways for the meeting:

—Some construction trades are already pricing themselves out of a good deal of their market, and labor must become more cost-conscious.

—It's doubtful if available mortgage money and serviced land will enable the current housing boom, at an annual rate of 125,000 units, to keep up through the year. Ottawa should assume a bigger share of present joint loans, he urges; also give lower down payment and other regulations.

—Federal authorities should continue co-operation in solving our highways problems after the Trans-Canada Highway is largely completed in two or three years.

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Fewer Builders On The Rocks

Business failures in the construction industry are down in number first quarter this year, from same three months last year. Dollar liabilities are up, though, as a result of one or two failures in the "other contractors" category. Figures are by Dun & Bradstreet of Canada.

Fifteen general contractors failed first quarter this year (18, year ago); no carpenters and builders (1); four building subcontractors (23); two other contractors (1). Liabilities, except for "other contractors" total $591,000 ($849,000 first quarter last year). But liabilities in the other contractors group are $352,000 (only $20,000 year ago).

• • •

Transport Cement On Site By Rail

Instead of trundling concrete across the job to waiting forms with power or man-propelled wheelbarrows or buggies, a British system whisks it along on a portable railroad.

In use by one firm at Welland, Ont., the "Mono-rail Transporter" has a skip which travels on a single rail laid on portable stands. The 13-cu. ft. skip is self-propelled, by a 3 hp. gasoline engine. No operator is needed. Speed is 100 yards a minute, on grades up to one in 18. When a large concrete mixer is being used, a trailer will increase "railway" capacity.

Promotion was launched at the Trade Fair this year, is to grow from here on. Unusual sale at the Trade Fair: to a hog raiser who wants to keep his 2,000 porkers happy with regular deliveries to their feed bins.

• • •

Goggle-eyed Octopod New Concrete Style

Blasé British Columbians will think little of it, but the front of Vancouver's School of Art will make outsiders' eyes pop.

"Elements of a new look for architectural concrete" are seen by local designers in a two-story decorative facade above the main entrance. To a layman, it looks rather like a cross between surrealism and an Egyptian tomb decorator's handiwork.

Designer Bruno Bobak says it pays tribute to the "rich association between nature and the artist in British Columbia." Three dimensional panels include such motifs as an "octopod with goggling eyes and trailing tentacles," a plodding tortoise, a drift of thistledown, sea worms. Whole thing was precast in plywood forms, with wooden cut-outs inserted for the various figures. Cost is low.

• • •

One Hour Color Movie Of Kitimat

Big money went into one of the most ambitious public relations efforts in the construction industry, an hour-long, full-color movie of the Kitimat project.

Sponsor is International Harvester. Though its red diesel crawlers figure prominently in the picture, there's no mention of the company name in script. Main idea is to sell an epic of engineering achievement, and role of machines in modern construction. A Hollywood outfit had the picture contract, but Associated Screen News, of Canada, did the filming, recording and editing. Working for Harvester as narrator is a Massey, Raymond.

Earthmoving contractors, technicians, engineers and government officials will see the film; general release will be made later.

Swift Expands In Maritimes

A major plant program at Moncton is expected to be completed by Swift Canadian Co. by January of next year.

Program involves three new sections for the company's meat packing plant there.

Modern Construction Ltd. of Moncton has contract for the complete job, which includes construction of new smoke houses, bacon chilling, slicing and wrapping facilities, order assembly rooms and shipping docks, hide cellar additions and new employee locker and dressing rooms.

The Moncton plant, which serves the Maritime provinces, was built in 1925, has been expanded year by year since then.

Expansion is to "keep pace with growth of Moncton and the Maritimes," says plant manager J. E. Hoover.

ANNOUNCING

Important Appointments in Canadian Industry, Finance, Business and Government

American Management Assn. (New York)—S. M. Finlayson, president, Canadian Marconi Co., Montreal, director, 1953-56.

Bathurst Power & Paper Co. (Bathurst, N.B.) — R. H. Christian, executive vice-president; E. S. Kirkland, secretary.

Calgary Stock Exchange — Laurence B. Gibson, president; A. M. McNab, 1st vice-president; Brian Locke, 2nd vice-president; Harold M. Kerr, secretary-treasurer; N. A. Jacques, C. W. Byler, G. M. Wittichen, James Cleave, F. G. Elves, H. J. Martin, committee of management.

Canadian Assn. of Actuaries—E. G. Schafer, assistant general manager, Dominion Life, president; F. R. Colquhoun, Imperial Life, secretary; J. C. Maynard, Canada Life, treasurer.

Canadian Liquid Air Co. (Montreal) — Paul Fleming, manager, medical gas division.

Canadian Westinghouse Co. (Hamilton)—W. A. Campbell, vice-president.

Controllers Institute of America (Vancouver Control) — Thomas Chambers, B. C. Electric Co., president; G. W. S. Montgomery, B. C. Telephone Co., vice-president; Gordon M. Steele, treasurer; J. A. Crawford, secretary; Alex. Campbell, R. A. Frampton, T. A. Fraser, J. Lorn McLean, R. T. Wilson, directors.

Cossor (Canada) Ltd. (Halifax)—A. C. Carter, general manager.

Dominion Bank (Toronto)—N. E. Tanner, former Alberta cabinet minister, president, Merrill Petroleums Ltd., Calgary, director.

Dominion Textile Co. (Montreal) —E. F. King, director.

Dominion Foundries & Steel Ltd. (Hamilton)—C. W. Sherman, hon. chairman and founder; F. A. Sherman, chairman; A. G. Wright, president; F. A. Loosley, executive vice-president; F. H. Sherman, executive vice-president.

Household Finance Corp. of Canada (Toronto)—J. T. MacEachern, manager, new branch, North Sydney, N.S.

Hydraulic Metals Ltd. (Toronto) —Patrick O'Henaghan, executive staff.

Institute of Chartered Accountants of Quebec—Rosaire Courtois, senior partner, Courtois Fredette & Co., Montreal, president.

John McKenney Bingham Ltd. (Toronto) — Charles W. Cook, account executive.

Levy Auto Parts Co. (Toronto)—Jack Elliot, director.

Life Insurance Institute of Canada—Geo. T. Prentice, Toronto, actuary, Imperial Life Assurance Co., president; G. Egerton Brown, Montreal, 1st vice-president; Geo. Ryrie, 2nd vice-president.

Life Underwriters Assn. of Montreal—J. R. Bourbonniere, Industrial Life, president; R. A. Notman, hon. president; Charles J. Pike, 1st vice-president; J. N. R. Lafreniere, 2nd vice-president; L. Vaillancourt, hon. treasurer.

Margison Babcock & Associates Ltd. (Toronto) — H. R. Musson, D. L. B. Hamlin, K. N. Craig, R. A. Cunningham, W. A. Stewart, F. I. L. Dyke, associates.

Marine Industries Ltd. (Sorel, Que.)— Douglas O. Price, regional district manager, new Toronto office.

Monsanto Canada Ltd. (Montreal) —Stuart P. Aikman, export sales supervisor, new export sales dept.; John C. Bonnett, plastics sales department; John A. Lawrence, to handle textile, paper, chemical and pharmaceutical sales, assisted in Quebec by Kevin McCabe, in Ontario by David E. Laurin.

Montreal Star Co. (Montreal)—R. L. Brown, general manager.

Nesbitt, Thompson & Co. (Montreal)—John R. Gale and James B. Faulkner, directors.

Personal Finance Co. of Canada (Toronto)—V. W. Wiltshire, manager, New Westminster No. 2 branch.

Pyrene Manufacturing Co. (Newark, N.J.)—H. B. Weed, president and managing director, Pyrene Manufacturing Co. of Canada Ltd., director.

Quebec Iron & Titanium Corp. (Montreal)—J. M.Van Winckle, chief engineer.

R. A. Daly Co. (Toronto)—R. A. Daly, chairman of the board; J. H. Christie, president; R. A. Daly, Jr. and Ian I. Campbell, vice-presidents.

Railway & Power Engineering Corp. Ltd. and Dominion Wheel & Foundries Ltd. (Montreal) — Edward J. McDermott, secretary-treasurer.

United Shoe Machinery Co. of Canada (Montreal) — Wm. E. Kearney, vice-president and general manager, succeeding C. Russell Todd, who becomes general manager and a director, United Shoe Machinery Corp., parent company.

Willis Advertising Ltd. (Toronto) —J. Whitehead, vice-president.

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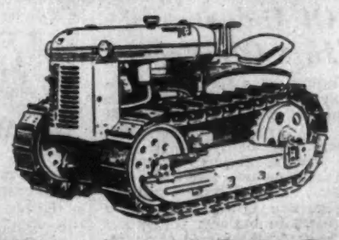

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THE FINANCIAL POST, Toronto, Ont.

Ontario Studies New Tax On Its Natural Resources

(Continued from page 1)

tight pending the federal general election.

The money put into the Highway Reserve Account will be spent, and then replaced. Ontario's highway program—$153 millions this year — has the province committed for huge sums.

Biggest bite, next to highways, is education. This item of $78.5 millions this year promises a steady increase for a minimum of eight years more. There are some signs of retrenchment. The Government this year cut out construction grants for gymnasia and such-like. The well-advertised "frills" have long since been dropped by the way.

Apart from the special grants to hospitals, regular Health Department expenditures are running close to $46 millions this year. As noted before, this item is almost bound to increase as well.

Provincial economists, and Premier Frost as well, it is indicated, feel certain Ontario's revenues cannot keep pace under the present system.

The gasoline tax, biggest money earner, could possibly be raised. But public feeling is that if anything the gasoline levy should be reduced. An increase of gasoline usage might be the next best thing to hope for, except that it would only make the demand even stronger for more highways — a vicious circle.

Similarly, the Premier could hope to get more from the liquor business. It brought in a tidy $40 millions or so last year, but relatively speaking the profit here hasn't increased to anywhere near the amount that expenses have.

This year about $123 millions is expected under the federal-provincial tax rentals agreement. Mr. Frost estimates a sizeable profit on this deal which turned over the lucrative corporations tax field to the Federal Government.

And so, more money is needed. Provincial economists point to expenditures they cannot conceivably reduce while it seems nearly impossible to get a commensurate increase from present sources of taxation.

Look for New Sources

That is why the study started: to find new sources of revenue. Provincial Economist George Gathercole this week left for the West for studies there.

Alberta's natural resources tax enabled that Government practically to wipe out its provincial debt, while Ontario's is still growing. It was only natural that such a levy would attract attention at Queen's Park.

Had Mines Minister P. T. Kelly found all the oil in James Bay district he had hopes of finding, Ontario's fiscal problem might have been solved in a trice. Just bring in Alberta's royalty plan.

But Ontario hasn't vast oil resources — not yet anyway — and it does have other natural resources in quantity, chiefly timber, pulp and veneer woods, and minerals.

A natural resources tax the politicians feel, would be popular with the voting public, where a sales tax could cause the Government's defeat as it did recently in New Brunswick.

Premier Frost has endorsed the idea but only in rather vague terms. He has never made a major policy speech singling out the issue, but the bits and pieces fit together well. Liberal members of the Legislature, and more recently especially Albert Wren of Kenora, have been most vigorous in urging that Ontario retain more of her forest wealth for her people.

What the Province Gets

Just how much the province does get back directly from her natural resources, apart from the benefits of more employment, etc., is difficult to estimate.

Timber dues and bonuses, plus royalties, etc., bring in about $19 millions annually. Of this, departmental operations such as administration and fire fighting cost about $12 millions, leaving a net revenue of $7 - $8 millions.

The industry's production value in the forest is around $548 millions; its worth is boosted to about $1,335 millions by the time it is processed or partially manufactured.

The picture is about the same for mining.

Production in 1951 totaled about $542 millions including primary petroleum production. Total revenue to the province directly was about $5 millions or less than 1.2%.

Indirectly the province gets more through the corporations tax which is now collected by the Federal Government and passed on.

An Estimate of Revenue

Just how hard would such a natural resources tax hit? How much would it bring in? And who would pay the biggest shot?

The figure of $20 millions has been mentioned, but it is little more than a guess.

The tax, no matter what amount it is calculated to raise, would likely be distributed rather heavily. That is, a few groups would likely be hit harder and that would be those groups that directly depend on extracting the raw material and transporting it elsewhere for processing.

The company which goes into the bush, cuts the timber, and shoots it down to the lake or the flat car for the furniture manufacturer would pay. The mine that, once established with a definite working reserve, takes out the ore and dumps it into the railway car for refining hundreds of miles away, would pay. They would be the major groups affected by the current thinking.

Undoubtedly there would be exceptions. Some systems would have to be worked out to give a new mine exemption for several years, and marginal producers such as gold mines will have to be dealt with. These are only some of the problems which crop up daily to stump the experts in their studies.

But they've been told to find more revenue. And all indications at Queen's Park point strongly to higher royalties and new taxes on natural resources.

Look For It Here

June 27, 1953

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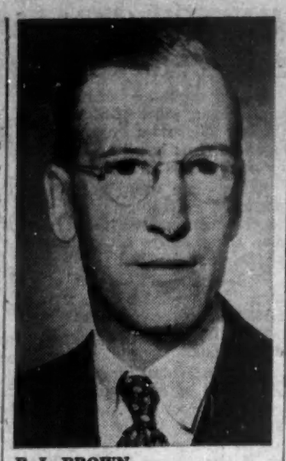


R. L. BROWN

has been appointed general manager, Montreal Star Co.

Many Prices Up For Chemicals

(Continued from page 1)

ers, some pesticides, cleaning compounds, refrigerants, explosives and other items.

Manufacturers of pulp and paper, rayon, steel, other chemicals, plastics, soap, rubber, pigments, among others—all heavy users of one or more of the chemicals—are busy with pencil and paper working out the impact on costs. Acid is moving up $2.50 a ton (basis 100%), anhydrous ammonia 1c a lb. in 100 lb. cylinders and chlorine $4 a ton. This represents an average price rise in these chemicals of around 7%.

Which Way Now?

But the big question is: will the latest cost rise be the straw that breaks the camel's back in a steadily upward trend?

Many manufacturers, particularly in the pulp and paper industry, feel they have already absorbed enough of these costs in form of higher freight and wage rates. Newsprint producers were hit earlier by a 20% hike in elemental sulphur; the current acid jump will affect the producers of fine papers to a greater degree.

Last year, the $78 million-a-year fertilizer industry consumed about 66% of Canada's record total of 770,000 tons of sulphuric acid, the acid entering into almost every product or process. As a result, price rises, which will vary according to amount of acid going into the product or process, are certain. Already superphosphate has jumped $1 a ton in U.S. reflecting an acid increase there earlier.

About 11% of sulphuric is consumed in manufacture of other heavy chemicals, these in turn entering into processing of dozens of other products. Another heavy user is the textile industry, particularly the rayon end, currently up against sharp competition from imports. The steel industry uses some 30,000 tons a year mainly in pickling operations (acid helps remove the troublesome scale that forms in certain processing steps.) The explosives industry uses another 32,000 tons a year.

The pulp and paper industry will also be heavily hit by the chlorine rise — accounting for some 58% of total yearly consumption. Only other large scale consuming field is heavy chemicals which uses 37%. The higher ammonia cost will hit chiefly at fertilizers and explosives manufacture.

Operating Cost Rises

Chemicals manufacturers claim rising costs of their operations have made price increases necessary, cite the earlier 20% hike in elemental sulphur price in U.S. (it takes around one part of sulphur to make three parts of sulphuric acid).

Chlorine people point in particular to rising cost of electric power—one of their biggest items. Rapidly expanding demand for nitrogen in all forms—ammonia, ammonium nitrate, ammonium phosphate, ammonium sulphate, ammonia liquors, etc.—in both U.S. and Canada has been gradually surpassing available supplies and price increases appeared inevitable.

Only exception here is ammonium sulphate — a coke-oven product associated with steelmaking. Sharp competition from European producers has made it virtually impossible, for the time being, for domestic producers to boost prices.

Credit Growth Too Fast?

(Continued from page 1)

lation to total sales and in relation to credit sales, a build-up following the removal of credit restrictions on May 6, 1952.

Receivables on installment sales in the first quarter of last year came to only $96.5 millions compared with installment sales of $209 millions. In the first quarter of this year, installment receivables had risen to $222 millions compared with installment sales of $289 millions.

The same narrowing of the gap between sales and receivables showed in charge accounts, though it was less marked there. In the first quarter of last year charge sales were $508 millions, and receivables $352 millions. In the first quarter of this year, charge sales were up to $540 millions, but receivables had risen to $418 millions.

The department stores showed the greatest increase in receivables. On installment sales, their installment accounts receivable have usually run well above current sales; and the gap widened considerably in the first quarter of 1953. Installment receivables dropped by only $5 millions (from $78 to $73 millions) in the three months. But installment sales dropped by nearly $30 millions (from $57 millions in Oct.-Dec. 1952 to $28.6 millions in Jan.-March 1953).

The proportionate increase in receivables was even more marked in department store charge account receivables; but the gap has been narrowing in the last three years, and early this year the charge receivables went ahead of charge sales.

One reason for this change, suggested by the DBS, is the increasing number of credit schemes used by the department stores.

J. H. CHRISTIE — R. A. DALY, JR. — IAN L. CAMPBELL

Mr. R. A. Daly of R. A. Daly Co. Limited announces the appointment of J. H. Christie as President and R. A. Daly, Jr. and Ian L. Campbell as Vice-Presidents of the Company, along with A. W. McLennan who continues as Vice-President. Mr. R. A. Daly will act as Chairman of the Board and also as senior partner in the affiliated company, R. A. Daly & Co., Members of the Toronto Stock Exchange. ✻

U.S. Farm Stockpile Bulk Poised On Trade Doorstep

(Continued from page 1)

the two have been lumped together.

Wheat: 474 million bushels; $1,095 millions.

Corn: 526 million bushels; $835 millions.

Cotton: 2 million bales; $306 millions.

Cottonseed Oil: 634 million lb.; $116 millions.

Tobacco: 503 million lb.; $174 millions.

Butter: 127 million lb.; $86 millions.

Dried milk: 184 million lb.; $32 millions.

Cheese: 77 million lb.; $30 millions.

The total at April 30, amounted to over $3 billions. But this year's crops have still to come, and the wheat carryover alone is expected to be nearly 600 million bushels.

Acreage Allotments

Before the fall the farmers are to be polled on the desirability of limiting crop acreages next year. If they refuse to accept acreage allotments, then the support price can be automatically reduced to 50% of parity. This could mean about $1.25 for wheat instead of this year's $2.20. If they accept acreage allotments, then the Department of Agriculture will decide how much each farmer may plant if he is to be eligible for the support price.

But this concerns next year's problem. The immediate worry is what to do with present surpluses.

One million tons of wheat (37½ million bushels) is to be given to Pakistan. This corresponds to Canada's allocation of $10 millions for the same purpose, ($5 millions out of the Colombo Plan funds, and another $5 millions extra.) This particular U.S. gift is welcomed here. But if United States started giving away all its farm surpluses, it could kill international trade in farm products.

Canada is most directly concerned with wheat. Other countries like New Zealand, which depend on exports of dairy products, are very anxious that "dumped" or "give-away" U.S. surpluses shall not steal their markets.

Administrative plans for disposing of the surpluses are not yet known, and the most discussed plan is one which has been put forward by the Farm Bureau Federation. It has some features which, according to rumor, the Eisenhower Administration might like to adopt.

The Bureau Plan

The Farm Bureau's plan, which has already been incorporated in a Senate bill, tries to ensure that U.S. surpluses should not displace legitimate trade. It would turn over $1 billion's worth of government-held stocks to the Mutual Security Administration for sale to needy countries. A condition of the sale would be that the U.S. products should be a "net addition to consumption" in the receiving country. It doesn't say how this is to be assured.

Another feature of the proposal bears some resemblance to the suggestion that Canada should "accept sterling" for its exports. The U.S. surpluses would be offered for sale at the going world price, but the U.S. would accept payment in local currencies.

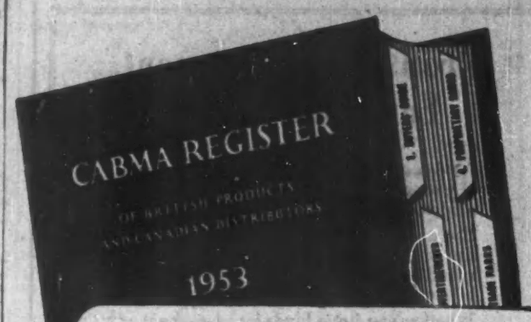
The objection to such a plan in Canada has always been that the local currencies are of no use to us, and that we might just as well give away the goods.

Equip More Theatres To Show 3-D Movies

Famous Players Canadian Corp. is adding immediately to the number of three-dimension projection equipments and wider screens in its theatres, says President J. J. Fitzgibbons. The new 3-D motion pictures "are responsible for a most favorable reaction at the box office," he adds.

MR. JACK ELLIOTT

Mr. Mark A. Levy, President, Levy Auto Parts Co. Ltd., 1400 Weston Road, Toronto, announces the appointment of Mr. Jack Elliott as a Director of the Company. Mr. Elliott has been associated with the Company for the past 13 years in various capacities and is now Director of Export and Import activities. Previous to his association with Levy Auto Parts Co. Ltd., he was connected with Mack Trucks of Canada Limited for a number of years. ✻



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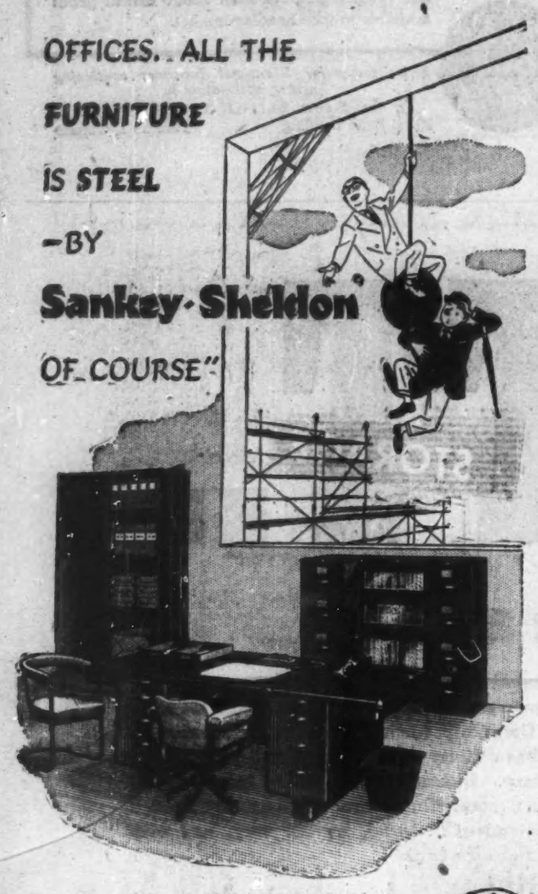

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INVESTMENTS THIS WEEK

No Need For These Blinkers

Many Companies Still Keep Shareholders In Dark

Accurate and timely information is a foundation on which most businesses depend if they hope to be at all successful.

Investors have a similar need for up-to-date news of what is happening to companies in which they are interested. Yet too many companies are still operating on a haphazard policy when it comes to letting their owners know what's going on.

In the important field of annual reports, a major source of information for investors, a study calling attention to some of the faults —mainly of omission—has just been issued by the Young Men's Section of the Montreal Board of Trade. In Montreal last week also, John A. Wilson, partner in the firm of George A. Touche & Co., chartered accountants, outlined some remedies which companies could apply in improving their information program.

A tabulation of first quarter earnings of Canadian companies large enough to be representative is virtually impossible to get, for the simple reason that the great majority of Canadian firms still consider it sufficient to report once a year to their shareholders, supplemented in some cases by general statements of trends.

Financing Needs

In a period in which the country is growing fast, and firms are expanding with it, there is a constant demand for funds to finance the expansion. Appeals are being made to the small investor to employ his funds.

If companies are really interested in developing a favorable attitude toward their enterprise, supplying regular and good information on their operations is a sound starting point.

Some argue that it is in the best interests of a shareholder not to issue quarterly reports because of seasonal fluctuations in the business which would distort the picture. But if there are similar periods in earlier years with which to compare the figures, there is very little danger of misinterpretation. If there is any danger, it can usually be explained briefly and simply.

The fault does not lie with just a few. Some of the largest and best known firms still leave their shareholders pretty much in the dark. The one with the widest ownership still regards issuance of quarterly earnings figures as contrary to shareholders' interests, even though similar firms in the U. S. have been issuing such reports for years, with no visible ill-effects to themselves or their shareholders.

* * *

Aluminium Ltd. Book Tells of 25-Year Growth

Aluminium Ltd. has just published a book, "Aluminium Panorama," which, in just over 120 pages, sets out in pictures and words the world-wide operations of this growing Canadian company.

As the book points out, keystone of Aluminium's sales policy is distribution of its Canadian ingot. This at the moment, despite an important market at home, means selling 80% of its Canadian aluminum output in other countries.

So, while four fifths of the company's fixed assets are in Canada, and while its gross assets increased in the period 1946-52 by more than $400 millions, additions to plant facilities and investments outside Canada in this same period amounted to more than $86 millions, a respectable outlay by any standard.

Aluminium usually supplies know-how as well as money in these outside developments. Much of its effort has been directed in areas where industrialization is making its first contributions to higher living standards. One of the largest postwar investments made by the company has been in Brazil (almost $12 millions) in a fully integrated aluminum operation, including smelters and new fabricating facilities.

In addition to chapters on the nature of the metal, the company, and its operations, the book includes an interesting statistical summary showing the highlights of its 25-year existence: an increase in gross assets from $71 millions to $972 millions; in total annual sales from $12 millions to $333 millions; in profits available for the common shares from a net loss in the first year to a $22 millions net profit in 1952.

N. E. TANNER

of Calgary, has been elected a director, Dominion Bank.

* * *

Stocks Versus Bonds; Four Considerations

With markets generally showing an uncertainty about whether to go up or down, many investors have been weighing the merits of stocks versus bonds as their best vehicle for investment.

In their June newsletter, Pemberton Securities of Vancouver comes up with these suggestions as a general guide:

(1) Over the long term we feel that the stocks of strong Canadian companies will provide a favorable investment experience. There will be humps and valleys in the trend of dividends and prices. Are you suited, temperamentally, to absorb these changes? Not everybody is.

(2) You alone can decide what the 20% dividend credit is worth to you. Remember that it is a creation of government and can disappear as quickly as it came. On the other hand, it could increase. To most people who pay income tax, it means that dividends are worth at least 1% more than bond interest; that is, a 4% dividend leaves just about as much in your pocket as interest from a 5% bond.

(3) The nature of a security is no guarantee as to performance. The bond of one company is not necessarily a better security than the common stock of another company. You must look beyond the type of security to the company itself and the business it represents. There are a number of defaulted bonds trading today; on the other hand, it is not difficult to name common stocks that have failed to provide the so-called "hedge against inflation."

(4) You should be "happy" with your securities. Regardless of your opinion of a security, if you don't like it, it has no place in your portfolio.

Shareholders OK Stelco Stock Plan

A plan to merge the preferred and ordinary stock of Steel Co. of Canada Ltd. into a single issue of common stock has been approved by both classes of shareholders.

At separate meetings, 97% of preferred shareholders who were represented and 99.9% of common shareholders voted in favor of the arrangement.

Following court sanction of the plan, authorized capital will be 5,133,328 n.p.v. common shares, of which 3,685,872 shares will be outstanding.

Plan provides that ordinary stock will be exchanged for new common stock on a share-for-share basis, while preference shares will be exchanged on basis of 32 new shares for each 30 old preference shares.

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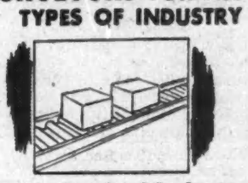

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M·A·F
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JAN. 31ST, 1950 - $1,000
DEC. 31ST, 1950 - $1,235
DEC. 31ST, 1951 - $1,440
DEC. 31ST, 1952 - $1,515
MAR. 31ST, 1953 - $1,563

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CITY OF RED DEER
CITY PLANNER and ENGINEER

The City of Red Deer, Alberta, and the Red Deer District Planning Commission require a city planner and engineer to act as Director of the District Planning Commission and City Engineer.

Duties include the preparation and implementation of development plans and the direction of the public works department.

Applicants should be qualified civil or municipal engineers or borough surveyors with experience in planning. Starting salary is approximately $4,500.00, depending on experience.

Applications, stating education, experience, age and date of availability, and giving two references, to be submitted by July 1, 1953, to:

The Commissioners,
City of Red Deer,
City Office,
RED DEER, Alta.

Toronto Offers $12.6 Millions

A $12,610,000 issue of 30-year serial debentures of the City of Toronto was offered this week by a syndicate headed by Wood, Gundy & Co. Coupon is 4¼%, compared with 4% on Toronto's previous issue.

Debentures were offered at prices to yield 4.10% at maturities of one-five years, 4.30% at six-ten years, 4.40% at 11-15 years, 4.45% at 16-20 years, and 4.50% at 21-30 years.

Proceeds of the issue will be used to pay hospital and other grants for which the city is committed, Board of Education requirements, Regent Park housing development, street extensions and improvements to waterworks and sewage disposal systems. Majority of the projects, already started, cover services which will be taken over by the Metropolitan Council on Jan. 1, 1954.

Sale of this issue will increase Toronto's gross debenture debt to $122,659,659, of which $74,558,187 is self-liquidating. This leaves net general and education debt of $48,101,472.

COMMERCIAL LAND & BUILDING FOR SALE By TENDER

— AJAX, ONT. —

Sealed tenders will be received by the undersigned until 12 o'clock noon the 17th day of July, 1953, for the purchase of the Commercial Centre owned by the Corporation in Ajax, Ontario. This building is located on the west side of Harwood Avenue and is now occupied by six retail stores and a branch bank.

The property is offered for sale subject to certain terms and conditions. Full particulars and form of tender may be secured from the undersigned.

Each tender must be accompanied by a security deposit in the amount of $5,000.00. A certified cheque or negotiable Dominion of Canada bonds are acceptable as a deposit.

The highest or any tender not necessarily accepted.

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Holders Approve Holt, Renfrew Recapitalization

MONTREAL (Staff)—Preferred and common shareholders of Holt, Renfrew & Co., at special meetings here last week, approved a capital reorganization plan designed to clear preferred share arrears (The Financial Post, June 13).

The plan must now be sanctioned by Superior Court and confirmed by Supplementary Letters Patent.

It provides that the present 10,000 7% cumulative $100 par preferred shares, and dividend arrears which will total $110.75 a share on Aug. 1, 1953, be canceled. For each present preferred share, holders would receive one new $5 cumulative $50 par first preferred share, one new $5 non-cumulative $50 par second preferred share and $10.25 in cash.

Each of the new classes of preferred would be redeemable at $100 a share plus accrued dividends.

Sturdie Propane Debenture Issue Has 5½% Rate

A $600,000 issue of 5½% convertible debentures of Sturdie Propane Ltd., Calgary, was offered at 99 this week by Wood, Gundy & Co. Dated June 15, 1953, the issue will mature in 1967.

Sinking fund provisions require annual payment of $24,000 by the company. Debentures are convertible until June 15, 1958, on basis of 83 common shares for each $500 of debentures.

Of total proceeds of the issue, $250,000 is to be spent on new bulk stations at Calgary, Provost, Grimshaw and Rycroft, Alta., and $49,000 for improvements to present bulk stations.

"With the prospect of a greatly increased supply of propane, the company wishes to accelerate its expansion program and take advantage of the large unserviced market existing in Western Canada," says President N. E. Tanner, former Alberta Minister of Mines and Minerals.

Sturdie was established in 1948 as a private company to distribute liquefied petroleum gases and to wholesale and retail liquefied gas appliances, storage tanks and related equipment. Capital structure was reorganized and company converted from private to public in March, 1953.

Net operating income in fiscal year ended Nov. 30, 1952, was $53,745, compared with previous fiscal year's $25,046. In the three months ended Feb. 28, 1953, net was $33,066.

Equity capitalization outstanding on pro forma balance sheet as at Feb. 28, 1953, consists of 149,335 n.p.v. common shares. Earned surplus is $169,265.

Bond Redemptions

Bond Issues:	Rate	Year	Cal.	Price
aInterprov. Pipe Line 3½% 1st mtge. bds., ser. B	3½%	1970	July 1	101.58%
eSao Paulo Elec. Co. Ltd. 50-yr. 1st mtge. bds.	5%	1962	July 1	♦

♦£300, £100 and £50.
e£85,620.
a$286,000.

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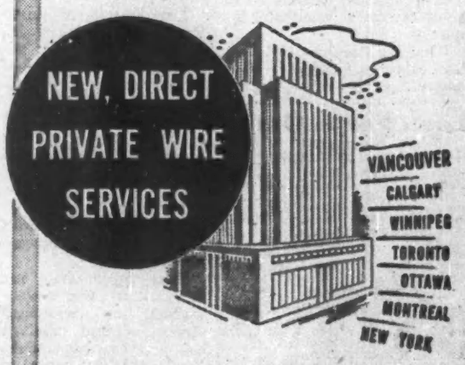

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Following a meeting of the Board of Directors of Canadian Vickers Limited, on June 22nd., the following executive changes were announced:

Mr. J. Edouard Labelle has resigned as President of the company but retains the Chairmanship of the Board. Col. Ormonde H. Barrett has been elected President of the company.

Mr. Labelle is also President of the Provincial Bank of Canada; President, Montreal Dry Docks, Limited; Director of La Prevoyance Assurance Company, International Paint (Canada) Limited and many other large Canadian companies.

Col. Barrett, the new President, has held high executive positions with the Goodyear Tire & Rubber Company of Canada, Limited and the Ford Motor Car Co. of Canada Limited. *

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MANAGED INVESTMENT

MacNab Buys More CPR, Noranda, Walker-G & W

MacNab's manager took advantage of a recent weak spell in the stock market to increase the account's holdings of three common stocks, with the proceeds of the sale of a $1,000 International Bank 4% bond, due 1962.

With the purchase of five shares of Noranda Mines and 10 of Hiram Walker-Gooderham & Worts, the account's holdings of those stocks were doubled. Purchase of 10 shares of CPR brought the portfolio's total to 60 CPR ordinary.

The MacNab Account Transactions

PURCHASED

No. of shares	Security	Cost per sh.	Amount
5	Noranda Mines ...	$66.75	$321.25
10	H. Walker-G. & W.	44.50	449.00
10	CPR	26.50	268.50

SOLD

Par value	Security	Selling price	Amount
$1,000	Internat Bank 4%, due 1962 ..	$99.00	$1,004.90

Note: Transactions made June 17, 1953.

MacNab's Manager Says:

The stock marked has shown a continuous decline for the past several weeks, with minor interruptions in the downward trend.

A valuation of your account as at June 15 shows a total market value of $23,431.00, compared with $23,676.75 on May 15.

Considerable resistance to the downward trend is noted in the better grade stocks in which your portfolio is concentrated, particularly in the public utility and paper groups.

The investing public apparently is waiting for a definite settlement of the Korean war. Until that is accomplished, the market will continue to drift, with the accent, probably, on the downside.

It is my intention during this present weak spell to add some additional common stocks to your portfolio from the proceeds of the sale of bonds held in your reserve fund. This will be done as soon as some point is reached in the market at which definite signs of a rally is indicated by the Dow Jones industrial averages, which on June 15 closed at 263.90.

Stocks which are now in a buying range, in my opinion, are CPR, Hiram Walker-Gooderham & Worts, Noranda Mines and Brazilian Traction.

In the month ended June 15, investment income totaling $64.25 was received. After the usual monthly withdrawal of $40 and the additional quarterly withdrawal of $5 to cover safekeeping charges, management fees, etc., his cash account was increased by $19.25 to $182.75. Following the transactions of June 17, the cash account stood at $53.10.

Here is position of the MacNab Account at June 15:

The MacNab Account Now Stands

No. of Shares		Cost per sh. $	*Market per sh. $
	Common Stocks		
30	Bank of Nova Scotia	37	40½
50	Brazilian Traction ...	12¼	10
40	B. C. Telephone	33½	35½
50	CPR	15¼	24½
50	Consumers' Gas	15½	15⅞
40	International Nickel ..	33¼	39½
50	Intern. Utilities	21½	26¼
5	Noranda Mines	74	64½
50	Powell River	26.35	23
10	H. Walker-G. & W. ...	42½	45
	Preferred Stocks		
40	Abitibi P. & P. $1.50	25½	26½
50	Acadia-Atlan. Sugar A	17¾	17¾
30	B. C. Power A	35	35
40	Imperial Tobacco 4% .	23¼	23½
30	Steel Co. of C. 7% pf.	32½	31½
	Government Bonds		
$1,000	Inter. Bank 4% 1952 .	100	99
	Convertible Corporate Bonds		
$1,000	Abitibi P&P 4¼% '61	100	98½
$1,000	B. C. For. Pr. 5% 1962	100	95
$1,000	Bras. Tract. 4½% 1971	93	85
$1,000	CPR 3½% 1966	100	93
$1,000	Cent. Leduc 5% 1963	101	91
$1,000	Dom. Stl. & C. 4% '61	100	93
$1,000	Dom. Textile 4% 1966	100	93
$1,000	West C. Brew. 5% '67	100½	98½
	Cash		$182.75
	Current market value of fund .		$23,421.00
	Annual income		$1,206.00
	Average yield on original $10,000...		12.06%

*Bid price June 15, 1953.

Kitimat Expansion Plans To Firm On U.S. Decision?

There was further evidence this week that the U. S. may decide to let Canada supply more of its aluminum needs instead of pushing ahead with earlier plans to have another 200,000 tons annual capacity built in the U. S.

Last month, Aluminium Ltd. arranged to sell 545,000 metric tons to Aluminum Co. of America and 168,000 metric tons to Kaiser Aluminum and Chemical Sales, to be delivered in the period 1953-58, also set aside 100,000 metric tons a year for independent U. S. fabricators (The Financial Post, May 30).

Reports from Washington this week indicate that in view of the greater supplies of Canadian aluminum that have been arranged the U. S. Government may withhold further aid to encourage domestic expansion of capacity. (Close to 250,000 metric tons have been contracted for by independent U. S. fabricators in addition to the tonnage to go to the producers.)

By now about 75% of the first and second rounds of expansion has been completed by the U. S. industry bringing total U. S. capacity to about 1.5 million tons annually or about double the pre-Korean total.

One of the three firms which had planned to participate in this "third round" expansion plan has indicated it can go ahead on the basis of the special depreciation and other aids already provided. But the other two, Olin Industries of East Alton, Ill. and The Wheland Co. of Chattanooga, Tenn., are said to be running into financing troubles. Olin has asked for a federal loan guarantee to solve its problems.

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Reduction in sales revenues reflects lower unit sales prices and the complete loss of sales revenue from herring oil and herring meal, reports President J. M. Buchanan.

A large carry-over from the record pack of 1951 brought about difficult market conditions in canned products throughout 1952. While 1952 pack of canned salmon was materially reduced, says the president, market demand was not sufficient to liquidate this pack and the 1951 carry-over.

During the 1952 calendar year, the British Ministry of Food was unable to purchase B. C. canned salmon. In late March, 1953, however, sufficient dollar funds were made available by the U. K. government to purchase 200,000 cases from the B. C. industry. Company's share of this order has been shipped in current fiscal year.

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Annual meeting is July 15.

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Bd. comm. amort. ..	8,000	.....
Bond int.	177,237	71,875
Tax reserve	4828,817	1,032,605
Minor. int.	484,729	99,441
Add: Profit re asset sale	10,622	159,270
Net profits	†713,918	951,817
Less: Cl. A divds. ...	211,671	211,795
Cl. B divds.	106,083	212,042
Surplus for year	†1,031,673	527,980

‡Credit.
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Earnings per Share and Dividend Record:		
Cl. A: Earned	d$2.53	$3.37
Paid	0.75	0.75
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TOWN OF WYNYARD, SASK.

$113,000.00 5% DEBENTURES

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D. DESMARAIS,
TOWN CLERK,
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$5 Million Issue By I.A.C. Of Sinking Fund Debentures

MONTREAL (Staff) — A new $5 million issue of Industrial Acceptance Corp. 5½% sinking fund debentures was offered this week by a group headed by Greenshields & Co. and Wood, Gundy & Co. due July 2, 1973. The 20-year debentures were priced at $100 and accrued interest.

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Balance available for debenture interest during the quarter totaled $3,540,689, while debenture interest and amortization of discount amounted to $231,862.

At March 31, 1953, consolidated total assets of $288,062,084 included notes and accounts receivable as follows: Consumer installment obligations, $214,989,204; dealer acceptances on motor vehicles and appliances, $43,505,657; and other installment obligations and sundry receivables, $18,385,390.

At that time, net tangible assets were equal to about $2,257 for each $1,000 of debentures outstanding. This takes into account the new debenture issue and sale of 175,000 new preferred shares, plus payment of expenses and discount in connection with these two issues which totaled $985,000.

E. G. SCHAFER S.A.

assistant general manager of Dominion Life Assurance Co. has been elected president of the Canadian Association of Actuaries, succeeding T. B. Morrison, assistant actuary, Manufacturers Life.

TOWNSHIP OF SMITH, Ont., has sold $25,000 5% debentures dated July 3, 1953, due 1954-73, at 99.25 to Anderson & Co. Proceeds for public school purposes.

SALES MANAGER

A Western Canadian manufacturer requires an experienced and capable Sales Manager to direct sales of its products which include commercial semi-trailers and sheet metal and plate products for the petroleum and petro-chemical industry. The Company wishes to enlarge its operation in the sheet metal, platework and mechanical fields and requires an energetic and capable man with vision to assist in this development. Reply to

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Helpful ideas toward reducing

INDUSTRIAL ACCIDENTS

Accident prevention in your plant hinges upon the knowledge and action of your supervisors, the key men in any industrial safety program. Our booklet, "Safety As It Applies to Supervisors," stresses this fact and presents information and recommendations based on the wide experience and observation of our staff. You will find it worthy of your personal attention. Write for a copy today, without obligation.

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We, as principals, offer:

TOWNSHIP OF NELSON
(COUNTY OF HALTON)

5% DEBENTURES

TO MATURE JULY 2ND, 1959 TO 1972
(LAST MATURITY ONLY SUBJECT TO CALL)

PRINCIPAL AND INTEREST PAYABLE AT TORONTO, MONTREAL OR BURLINGTON

PRICE: TO YIELD 4.85%

BELL, GOUINLOCK & COMPANY
LIMITED
ESTABLISHED 1930
MONTREAL TORONTO WINNIPEG
LONDON HAMILTON KITCHENER

KERNAGHAN & CO. LIMITED

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A successful and progressive group, expert in legal — production — sales — public relations divisions, seek an established business with a sales and earning record. Will purchase outright, or controlling interest up to $500,000. Replies treated in confidence.

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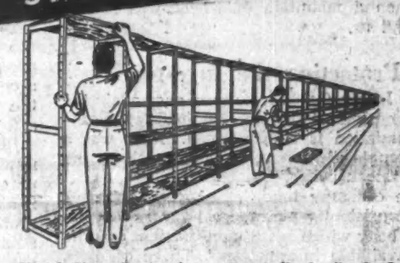

Storage problems? Then discover how economically Lundia Pre-Fab Industrial wooden shelving can solve them! Extremely strong, Lundia has a variety of storage uses in warehouses, stores, offices, factories, etc. Easy to erect, extend or dismantle. No tools needed. Write today for further particulars.

Free!—Floor Chart for efficient storage planning supplied on request.

HILL - CLARK - FRANCIS
LIMITED
NEW LISKEARD Toronto Sales Office ONTARIO 57 Bloor Street West

New Issue

$600,000

Sturdie Propane Limited

(Incorporated under the laws of Alberta)

5½% Convertible Sinking Fund Debentures

To be dated June 15, 1953 To mature June 15, 1967

Principal and half-yearly interest (June 15 and December 15) payable at any branch in Canada (Yukon Territory excepted) of the Company's bankers. Coupon debentures in denominations of $500 and $1,000 registrable as to principal only.

Callable in whole or in part on at least thirty days' notice at the option of the Company at 105 on or before June 15, 1954, thereafter at prices declining by .35% per annum until June 15, 1966, and thereafter until maturity at 100; together in each case with accrued interest to the date of redemption.

A sinking fund will be provided for this issue amounting to $24,000 per annum commencing June 5, 1954.

Conversion Privilege

These Debentures will be convertible at the holder's option on or before June 15, 1958, unless previously redeemed, into 83 common shares of the Company for each $500 principal amount of Debentures.

Sturdie Propane Limited has been engaged since 1948 in the distribution of liquefied petroleum gases (propane) and in the wholesaling and retailing of liquefied gas appliances, storage tanks and related equipment in the Province of Alberta. Propane has proven an economical and satisfactory fuel. Its chief domestic uses include cooking, water heating, refrigeration and space heating in areas not served by natural gas. It is also used as fuel for tractors, trucks, buses and stationary engines and in a number of industries.

With the prospect of a substantial increase in the supply of propane accompanying the development of the petroleum and natural gas industry, the Company foresees a major expansion in the use of propane in Western Canada. Sturdie Propane Limited, already a leader in the field, will employ the proceeds of this issue to enable a larger participation in the prospective expansion of the propane industry in Western Canada.

We offer these Debentures, as principals, subject to prior sale and change in price, if, as and when issued and accepted by us and subject to the approval of Counsel.

Price: $99 and accrued interest, to yield about 5.60%

It is expected that Interim Certificates will be available for delivery on or about June 25, 1953.

A prospectus describing this issue will be forwarded promptly on request.

Wood, Gundy & Company Limited — **Osler, Hammond & Nanton Limited**

Cochran, Murray & Co. Limited — **Carlile & McCarthy Limited**

Sydie, Sutherland & Driscoll Ltd. — **Okanagan Investments Limited**

CANADIAN VICKERS LIMITED

J. EDOUARD LABELLE, Q.C., O.B.E. COL. ORMONDE H. BARRETT, O.B.E., E.D.

Following a meeting of the Board of Directors of Canadian Vickers Limited, on June 22nd., the following executive changes were announced:

Mr. J. Edouard Labelle has resigned as President of the company but retains the Chairmanship of the Board. Col. Ormonde H. Barrett has been elected President of the company.

Mr. Labelle is also President of the Provincial Bank of Canada; President, Montreal Dry Docks Limited; Director of La Prevoyance Assurance Company, International Paint (Canada) Limited and many other large Canadian companies.

Col. Barrett, the new President, has held high executive positions with the Goodyear Tire & Rubber Company of Canada, Limited and the Ford Motor Car Co. of Canada Limited. *

METHODS ANALYST

University graduate with one or two years practical accounting experience desirable. 5-day week, cost-of-living bonus and other employee benefits. For appointment please telephone:

The Employment Manager
MAyfair 4481, Local 222
FRIGIDAIRE PRODUCTS OF CANADA LIMITED

MADE THROUGHOUT IN BRITAIN — USED THROUGHOUT THE WORLD

ADDRESSING MACHINES AND BUSINESS SYSTEMS

Opens the door to mechanised writing of:

- Municipal Assessment Rolls and Notices
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- Direct Mail

Write or phone for full information

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3¾%

ON CANADA PERMANENT 3 YEAR DEBENTURES

3¼% FOR 1 YEAR
3½% FOR 2 YEARS
3¾% FOR 3 to 10 YEARS

Debentures may be issued in registered form or payable to bearer in amounts from $100 to $100,000.

Canada Permanent Debentures have been favoured by individuals and institutions in Canada and elsewhere since 1855.

Call or write for Debenture folder.

CANADA PERMANENT MORTGAGE CORPORATION
320 BAY STREET AT ADELAIDE, TORONTO

ASSETS EXCEED $100,000,000

53-20

INVESTORS!

you'll sleep better with your money in

T.I.F.

The biggest problem for most modest investors and the cause of many sleepless nights is answering the age-old question of when to buy and when to sell stock holdings. TIMED INVESTMENT FUND'S predetermined plan for the buying and selling of securities eliminates this problem for you. Through this plan, based on the stock market's continued fluctuation, we offer a steady but conservative "inflation-proof" growth, meanwhile keeping your investment safe and easily convertible to cash.

For the first time, we are offering TIMED INVESTMENT FUND shares for sale by mail, direct to the investors. Customary acquisition costs are halved.

Return the coupon for further information on how you can protect your investment capital through T.I.F.

Please send me further information and a copy of your Prospectus.

Name.....

Address.....

City.....Province.....

Mail to: **COLLIER, NORRIS & QUINLAN LTD.**
507 Place D'Armes, Montreal 320 Bay St., Toronto

MANAGED INVESTMENT

MacNab Buys More CPR, Noranda, Walker-G&W

MacNab's manager took advantage of a recent weak spell in the stock market to increase the account's holdings of three common stocks, with the proceeds of the sale of a $1,000 International Bank 4% bond, due 1962.

With the purchase of five shares of Noranda Mines and 10 of Hiram Walker-Gooderham & Worts, the account's holdings of those stocks were doubled. Purchase of 10 shares of CPR brought the portfolio's total to 60 CPR ordinary.

The MacNab Account
Transactions

PURCHASED

No. of shares	Security	Cost per sh.	Amount
5	Noranda Mines ...	$64.75	$321.25
10	H. Walker-G. & W.	44.50	440.00
10	CPR	20.50	205.50

SOLD

Par value	Security	Selling price	Amount
$1,000	Internat Bank 4%, due 1962 ..	$90.00	$1,004.90

Note: Transactions made June 17, 1953.

MacNab's Manager Says:

The stock marked has shown a continuous decline for the past several weeks, with minor interruptions in the downward trend.

A valuation of your account as at June 15 shows a total market value of $23,431.00, compared with $23,676.75 on May 15.

Considerable resistance to the downward trend is noted in the better grade stocks in which your portfolio is concentrated, particularly in the public utility and paper groups.

The investing public apparently is waiting for a definite settlement of the Korean war. Until that is accomplished, the market will continue to drift, with the accent, probably, on the downside.

It is my intention during this present weak spell to add some additional common stocks to your portfolio from the proceeds of the sale of bonds held in your reserve fund. This will be done as soon as some point is reached in the market at which definite signs of a rally is indicated by the Dow Jones industrial averages, which on June 15 closed at 263.90.

Stocks which are now in a buying range, in my opinion, are CPR, Hiram Walker-Gooderham & Worts, Noranda Mines and Brazilian Traction.

In the month ended June 15, investment income totaling $64.25 was received. After the usual monthly withdrawal of $40 and the additional quarterly withdrawal of $5 to cover safekeeping charges, management fees, etc., his cash account was increased by $19.25 to $182.75. Following the transactions of June 17, the cash account stood at $53.10.

Here is position of the MacNab Account at June 15:

The MacNab Account
Now Stands

No. of Shares		Cost per sh. $	*Market per sh. $
	Common Stocks		
20	Bank of Nova Scotia	37	40½
50	Brazilian Traction ...	12¼	10
40	B. C. Telephone	33½	35½
50	CPR	15¼	24½
50	Consumers' Gas	15½	15⅜
40	International Nickel ..	33¼	39½
50	Intern. Utilities	21½	26¼
5	Noranda Mines	74	64½
50	Powell River	26.33	23
10	H. Walker-G. & W. ...	42½	45
	Preferred Stocks		
40	Abitibi P. & P. $1.50	23½	26½
50	Acadia-Atlan. Sugar A	17¾	17¾
30	B. C. Power A	35	35
40	Imperial Tobacco 4% ..	23½	23½
30	Steel Co. of C. 7% pf.	32½	31½
	Government Bonds		
$1,000	Inter. Bank 4% 1952 .	100	99
	Convertible Corporate Bonds		
$1,000	Abitibi P&P 4¼% '61	100	98½
$1,000	B. C. Por. Pr. 5% 1962	100	95
$1,000	Brad. Tract. 4½% 1971	93	85
$1,000	CPR 3½% 1966	100	93
$1,000	Cent. Leduc 5% 1963 .	101	91
$1,000	Dom. Sti. & C. 4% '61	100	93
$1,000	Dom. Textile 4% 1966	100	93
$1,000	West C. Brew. 5% '67	100½	90½
	Cash		$182.75
	Current market value of fund .		$23,431.00
	Annual income		$1,268.00
	Average yield on original $10,000...		12.98%

*Bid price June 15, 1953.

Kitimat Expansion Plans To Firm On U.S. Decision?

There was further evidence this week that the U. S. may decide to let Canada supply more of its aluminum needs instead of pushing ahead with earlier plans to have another 200,000 tons annual capacity built in the U. S.

Last month, Aluminium Ltd. arranged to sell 545,000 metric tons to Aluminum Co. of America and 168,000 metric tons to Kaiser Aluminum and Chemical Sales, to be delivered in the period 1953-58, also set aside 100,000 metric tons a year for independent U. S. fabricators (The Financial Post, May 30).

Reports from Washington this week indicate that in view of the greater supplies of Canadian aluminum that have been arranged the U. S. Government may withhold further aid to encourage domestic expansion of capacity. (Close to 250,000 metric tons have been contracted for by independent U. S. fabricators in addition to the tonnage to go to the producers.)

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Net profit of IAC for the three months ended March 31, 1953, totaled $1,629,101, compared with $4,997,281 in the full year 1952 and $3,004,268 in 1951. Average receivables outstanding during the period amounted to $265,322,522, against $200,936,174 in 1952.

Balance available for debenture interest during the quarter totaled $3,540,689, while debenture interest and amortization of discount amounted to $231,862.

At March 31, 1953, consolidated total assets of $288,062,084 included notes and accounts receivable as follows: Consumer installment obligations, $214,989,204; dealer acceptances on motor vehicles and appliances, $43,505,657; and other installment obligations and sundry receivables, $18,385,390.

At that time, net tangible assets were equal to about $2,257 for each $1,000 of debentures outstanding. This takes into account the new debenture issue and sale of 175,000 new preferred shares, plus payment of expenses and discount in connection with these two issues which totaled $985,000.

E. G. SCHAFER S.A.

assistant general manager of Dominion Life Assurance Co. has been elected president of the Canadian Association of Actuaries, succeeding T. B. Morrison, assistant actuary, Manufacturers Life.

TOWNSHIP OF SMITH, Ont., has sold $25,000 5% debentures dated July 3, 1953, due 1954-73, at 99.25 to Anderson & Co. Proceeds for public school purposes.

Helpful ideas toward reducing

INDUSTRIAL ACCIDENTS

Accident prevention in your plant hinges upon the knowledge and action of your supervisors, the key men in any industrial safety program. Our booklet, "Safety As It Applies to Supervisors," stresses this fact and presents information and recommendations based on the wide experience and observation of our staff. You will find it worthy of your personal attention. Write for a copy today, without obligation.

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LUNDIA SIMPLIFIES STORAGE NEEDS

Storage problems? Then discover how economically Lundia Pre-Fab industrial wooden shelving can solve them! Extremely strong, Lundia has a variety of storage uses in warehouses, stores, offices, factories, etc. Easy to erect, extend or dismantle. No tools needed. Write today for further particulars.

Free!—Floor Chart for efficient storage planning supplied on request.

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LIMITED
NEW LISKEARD Toronto Sales Office ONTARIO 57 Bloor Street West

New Issue

$600,000

Sturdie Propane Limited
(Incorporated under the laws of Alberta)
5½% Convertible Sinking Fund Debentures

To be dated June 15, 1953 To mature June 15, 1967

Principal and half-yearly interest (June 15 and December 15) payable at any branch in Canada (Yukon Territory excepted) of the Company's bankers. Coupon debentures in denominations of $500 and $1,000 registrable as to principal only.

Callable in whole or in part on at least thirty days' notice at the option of the Company at 105 on or before June 15, 1954, thereafter at prices declining by .35% per annum until June 15, 1966, and thereafter until maturity at 100; together in each case with accrued interest to the date of redemption.

A sinking fund will be provided for this issue amounting to $24,000 per annum commencing June 5, 1954.

Conversion Privilege

These Debentures will be convertible at the holder's option on or before June 15, 1958, unless previously redeemed, into 83 common shares of the Company for each $500 principal amount of Debentures.

Sturdie Propane Limited has been engaged since 1948 in the distribution of liquefied petroleum gases (propane) and in the wholesaling and retailing of liquefied gas appliances, storage tanks and related equipment in the Province of Alberta. Propane has proven an economical and satisfactory fuel. Its chief domestic uses include cooking, water heating, refrigeration and space heating in areas not served by natural gas. It is also used as fuel for tractors, trucks, buses and stationary engines and in a number of industries.

With the prospect of a substantial increase in the supply of propane accompanying the development of the petroleum and natural gas industry, the Company foresees a major expansion in the use of propane in Western Canada. Sturdie Propane Limited, already a leader in the field, will employ the proceeds of this issue to enable a larger participation in the prospective expansion of the propane industry in Western Canada.

We offer these Debentures, as principals, subject to prior sale and change in price, if, as and when issued and accepted by us and subject to the approval of Counsel.

Price: $99 and accrued interest, to yield about 5.60%

It is expected that Interim Certificates will be available for delivery on or about June 25, 1953.

A prospectus describing this issue will be forwarded promptly on request.

Wood, Gundy & Company Limited — **Osler, Hammond & Nanton Limited**

Cochran, Murray & Co. Limited — **Carlile & McCarthy Limited**

Sydie, Sutherland & Driscoll Ltd. — **Okanagan Investments Limited**

Don't Forget The Consumer

The other day a large manufacturing concern in the United States and its labor union, found themselves on the same side of the fence —the shady side where there wasn't too much light.

In mass meetings they both vigorously opposed the threat of foreign competition. It seems that a Swiss firm had received contracts for equipment for an atomic energy plant through the time-honored custom of submitting a lower bid. Both sides screamed that this was horrible —that it must not be allowed.

Unfortunately this is by no means an isolated case. There have been similar attempts for ganging up in several industries where foreign imports have come into the picture.

While such short-sighted action has nothing to commend it, it is understandable how both labor and management want to hold the home market. But one would think the home market is reasonably safe under the Buy American Act which forces foreign bids on federal contracts to be at least 25% under domestic ones to have a chance at all.

There is, however, something more important in this issue.

Labor peace is desirable. But the public good is best served when the interests of business and labor are balanced—with each kept in check. That is the very essence of collective bargaining. The two sides bargain out their positions.

When they both jump in on the same side it is no longer collective bargaining, and as it has been said many times, "Heaven help the consumer."

Moreover, in the long run, they are only hurting themselves because they too, whether in one camp or the other are likewise consumers.

While Wheat Piles Up

Never before have wheat stocks, actual and in sight, reached such peaks in North America. In farmers' bins alone in Canada we have left over from last fall's bumper harvest almost as much wheat as we produce in a light year. In addition, commercial storage is jammed and a new crop will be ready for harvest in eight to ten weeks' time.

Across the line in the United States it is the same story, only more so. There is more than half a billion bushels in commercial storage and the new crop now starting to move, it is estimated, will add over 1,100 million bushels. Combined, that will shove visible supply to the highest ever, even above the previous record touched in 1942-43, when more than half the world export markets were cut off by war.

"The present wheat surplus," as the New York Times points out, "is not the result of such a stroke of misfortune. It is the result of a succession of years in which, under the Government's farm policy, the wheat farmer has been encouraged to produce, regardless of the dimensions of his prospective market, in the comforting knowledge that if he couldn't sell his produce anywhere else the benign government stood ready at all times to take it off his hands at a price that would be profitable."

The Times, of course, is referring directly to the U. S. situation. But much of what it says would fit the Canadian case as well. Here, too, we have fixed guaranteed prices and have gone even farther in preventing the natural law of supply and demand from functioning. So far have we wandered from reality that in the recent International Wheat Agreement negotiations at Washington, we joined the U. S. delegates in actually seeking higher maximum prices at a time when a mountain of wheat was rolling up behind us.

Protecting the Investor

In the Indore Gold Mines case, once again the special and important role of an official securities commission is demonstrated. Here was a good example of prompt, efficient work by the Ontario "stock police."

Of the company investigated, the OSC says it has "consistently pictured a large and available ore body which is still non-existent according to available information." Three officials, Paul Gliddon, president and field manager, Roy T. Thompson, secretary-treasurer, and F. W. Anderson, engineer, reports the Commission, "must be held responsible for the sales campaign of fraud and deception."

To confirm its suspicions of extravagant claims, the OSC retained an engineer, W. Roy Dunbar, to make a special investigation into the engineering aspects of the situation. It was only as the result of Mr. Dunbar's investigations that the true situation was established and the necessary action with respect to Indore taken.

None but a qualified engineer with the backing of the provincial authorities could have established that some $4,350,000 of claimed ore reserves did not exist and that therefore the chances of making a profit were practically nil.

The action of the OSC will undoubtedly result in saving investors thousands of dollars.

Who Disenfranchises Whom?

Speeches in the town hall. Speeches in the schoolhouse. Handshakes at the picnic.

Wilted collars and tired, tired candidates everywhere.

A summer campaign is hard and grueling. But the date, August 10, will soon be here. By selecting it, the campaign has been kept short. Candidates and voters may be thankful for that.

As for disenfranchising Canadians on vacation, a survey of plant shutdowns shows that most workers will be back on their jobs by August 10. The vacation peak is over the week before election day.

There will be thousands of disenfranchised Canadians. But don't blame vacations, sickness, harvest or other work, or the August 10 date.

They will be disenfranchised because they are too little concerned about the country's well-being to stir themselves from their hammocks and go to the polls.

Information or Propaganda?

Everything would be quite all right about these American Information Service Libraries in Europe if only they would just stop calling themselves Libraries in general and change themselves to Libraries of Anti-Communist Propaganda. Nobody could complain of a Library of Anti-Communist Propaganda if it didn't contain the works of Howard Fast, Thomas Paine and Jack London, none of whom were particularly anti-Communist writers. If the term Library of Anti-Communist Propaganda is too long and involved, call them McCarthy Libraries and let it go at that. But not Information Service. Information is too broad a term.

There are, it is true, reasons why the State Department of the United States might not want to call its book collections Libraries of Anti-Communist Propaganda. Propaganda is not an alluring word. People do not readily flock to places where they know they are going to get that. They are much more likely to come to places where they think they are going to get information. On the other hand, if the State Department does not intend to give them information, except of a very limited character, should it not admit it, and stop claiming to be a source of universal knowledge?

By limiting itself to anti-Communist propaganda, it could cut out the works of Benjamin Franklin, Thomas Jefferson, Andrew Jackson, Abraham Lincoln, Woodrow Wilson, Franklin Roosevelt and Will Rogers, all of whom, though far from being Communistic, said things which must be embarrassing at times to the McCarthy mind.

Lots More in the Cupboard

We can stop worrying. The world is not facing starvation. Gloomy old Malthus who predicted that very calamity about 130 years ago—now turns out to be merely an ill-informed pessimist, not a real economist at all.

Malthus didn't figure on railroads, refrigeration, high-powered fertilizers, bug-killers, and mechanization. He certainly didn't expect that scientific farmers in the 20th century would be able to produce as much as 10 peasants did in the 18th century, and scientific farming is only getting started in this carelessly cultivated world.

Boiled down to simple language here's the reassuring word from headquarters of the United Nations Food and Agriculture Organization:

"Through proper utilization of soil, water and climatic resources it is technically possible to bring about increases in agricultural production that not only will keep pace with population growth in the world, but also insure a reasonable standard of nutrition for all."

Grandpa Didn't Need This

"Corns on the feet are usually a confession that the shoes are ill-fitting, probably too short or too narrow. To avoid corns, wear properly fitted shoes."

This gem is from a release of the federal Department of Health and Welfare. Also from the long list of "goodies" sent to newspapers as press fillers comes a warning: "Don't try to get a complete suntan during the first day or so of the vacation. Sunburn is painful. It's much safer to get that tan gradually."

There are other random thoughts — very random — in the release. In restaurants "the presence of vermin or insects on the premises is also dangerous." As well, it is supposed to be useful to know that strawberries "need no testimonial to persuade people that they are good to eat" and that as the release says, "a child who is sick in bed needs entertainment to help pass the long hours."

Out of Ottawa and the provincial capitals come many releases and fine statistical reports on which business and newspapers depend. Unfortunately, every now and again along comes something like this one.

We could have survived without it. And perhaps the taxpayer, too, who foots the bill, would have been just as happy to have used his own horsesense. Grandpa didn't need this. We don't either.

Storehouse For Decisions

A dusty corner behind the steampipes in the boiler room or a few shelves under the stairs used to be the only "references" companies kept. Today the story has changed and the business library with its special storehouse of information has come into its own.

There are 104 of them in Toronto, 80 in Montreal alone. This week 1,000 librarians from specialized libraries from all over Canada and the United States have tossed off the shackles of the "Quiet Please" sign and have met in Toronto to discuss their common problems in giving better service.

Facts today are the key to business success, and for dozens of companies the facts are stored in their own special libraries. Take The Financial Post and its specialized services. There is not a single issue, nor a single corporation service card or survey of industrials, mines or oils, published without reference to its complete and detailed record of Canadian business.

It isn't every day that someone wants to know the bank rate in Montenegro in 1902, the compression ratio of a Model T Ford, the middle initial of the prime minister of Iceland, or the earnings of XYZ Co. in 1923.

But when he does, he wants it in a hurry and he wants it right. Where does he look? Does he spend hours rooting through the loot under the stairs? Of course not.

He calls the library—and he gets a better, faster answer from the specialized library geared to meet a particular segment of probable need.

Better But Not Perfect

Canadian companies generally have done a good job in improving the quality and usefulness of their annual reports in recent years.

That there's still lots of room for improvement, however, is indicated in a survey conducted by the Young Men's Section of the Montreal Board of Trade. Of the reports of 55 leading Canadian companies studied, only 10 received 75 points or better out of a possible 100, for the general layout and narrative checks on the way the financial information was presented found the annual reports similarly wanting.

Some companies explain their reluctance to give full information by saying it might be helpful to competitors. But, as this Montreal survey points out: "Disclosure of so-called company secrets, such as production and sales figures, has not hindered the growth of American companies, most of which, in conforming with Securities Exchange Commission and New York Stock Exchange regulations, provide fairly frequent and lucid information to their stockholders and public."

Napier Moore's

Scratch Pad

WITH AN ELECTION in the news, Peter Newman, of Montreal, thought, and thought rightly, that we might be interested in a joke which circulated through Czechoslovakia following the recent "factory council" elections.

According to the Communist idea of elections, voters were led to the polls and handed an envelope which they had to put into a ballot box. One of the more inquisitive workers opened the envelope and tried to examine the ballot slip. He was immediately seized by a guard who indignantly demanded what he was doing that for. Replied the worker, "I just wanted to find out for whom I'm voting." Roared the guard, "Are you out of your mind? Don't you know that the ballot is secret?"

* * *

THIS LEADS us to another Czech (really he is part French) we heard speak with feeling of the freedom Canadians take so much for granted but which, to peoples coming to Canada from other less fortunate countries is thrilling. His name is Oscar Berceller. He is a restaurateur; operates Winston's Theatre Grill in Toronto.

One night last week, Oscar closed his restaurant to ordinary business so that he could have a party for a lot of people who have rallied round since he made his start. It was in celebration of an award made to Winston's by a U. S. magazine, Holiday, for being one of the best-run restaurants in the whole of North America and Mexico. And it was then that Oscar Berceller spoke so warmly of the joy of being in a land where people could do what they wanted to do.

* * *

WHILE WE'RE ON THE SUBJECT OF FOOD we might as well tell you what J. Lyons & Co. did in preparation for Coronation year visitor business in London. Lyons operate a vast catering concern, a chain of tea-shops, the Trocadero Restaurant and the Cumberland Hotel. Incidentally, the company does the catering for Buckingham Palace garden parties.

Before the Coronation season, Lyons sent representatives by air to all main overseas centres of prospective visitor traffic. They collected menus from scores of hotels and recipes of dozens of popular dishes. Back in London, the Lyons experts spent weeks on research. Result: foreign visitors could get their favorite native dishes. From April 23 to the end of August, more than 60 dishes of American origin were and will be available at the Troc and the Cumberland.

Canadian Hotel Review and Restaurant, the source of the foregoing, gives Lyons marks for enterprise but thinks they would have been a lot farther ahead had they spent the same money and effort in perfecting typical British dishes and menus.

* * *

BY NO STRETCH of imagination could Col. McCormick, owner of the Chicago Tribune, be called pro-British. Nevertheless, we read in Editor and Publisher that the Tribune was the first paper in the U. S. to show the splendor of the Coronation in full color. It accomplished this in its Thursday edition, out on the Wednesday night. Moreover, for four days prior to the Coronation, it ran color pictures relating to the event.

Also interesting is the fact that the New York News had a photo in print in a Tuesday edition one hour and 43 minutes after the Queen left Buckingham Palace, and sold 100,000 copies above normal. It could have sold an additional 50,000 had it printed that many more.

* * *

In Canada, the Coronation is still pulling. The J. Arthur Rank picture, "A Queen is Crowned" is breaking all records. Example: The population of Peterborough is around 38,000. In six days the film played to 27,000 paid admissions.

* * *

A COLLEAGUE OF OURS who recently visited Vienna has described to us with some awe and boundless enthusiasm some of the services provided by the telephone system of that city.

Latest innovation is for the benefit of student stenographers. By dialing a certain number, shorthand students who want practice can get six minutes of dictation. By dialing other numbers subscribers can get a fairy tale for children, recipes for cooking, reports on snow conditions for skiers, the weather generally, and the time.

The stuff is recorded.

Stop Me If

He was one of the vaguest and most absent-minded of men. One day his wife sent him to the village shop to buy her some preserving jars. He saw some displayed upside down on a shelf, and touching the top of one absently, he exclaimed: "Useless. Quite useless. The thing has no mouth."

Then he picked it up and looked at the other end. "Ridiculous," he muttered. "The thing has no bottom, either."

* * *

Young Henderson had attained man's estate, but his deceptively youthful appearance often proved a handicap in social life. On one occasion, however, he attended a gala affair with high hopes. Noting that the women rather outnumbered the men, he was emboldened to approach an attractive damsel and request the pleasure of a dance.

The young lady looked at him with marked disdain. "I'm sorry," she said, "I never dance with a child."

But young Henderson was equal to the occasion. Without hesitation he murmured, "I beg your pardon, madam—I failed to notice your condition."

—Source: Canadian Machinery

Post Scripts

Big Man — Big Job

Thomas Wardrope Eadie, 54, has been named new president of the Bell Telephone Co. of Canada, one of the largest of this country's industrial giants. He fills the shoes of 66-year-old Frederick Johnson, who had been president since 1944 and has now been made chairman.

"Tom" Eadie is a big man (6 ft. 2½ in.) with grey hair and heavy black eyebrows. The son of an Ottawa clergyman, he's spent his entire career with Bell Telephone, coming up through the operating end of the business. Quiet and very modest, he is known as an extremely hard worker and capable executive.

MR. EADIE.

The new president's roots lie in the Old Country. His father set out from Scotland to see the world as a young man, eventually docked in Canada, liked it here and decided to stay. After graduating from McGill, he converted an Ottawa mission into a church, now known as Parkdale United.

Eadie grew up in Ottawa and in 1916, after finishing at Lisgar Collegiate, joined the Royal Canadian Naval Air Service. He trained with the U. S. Air Force and after the war studied civil engineering at McGill, working on survey crews during the summers.

In 1923, when Eadie joined Bell Telephone in Montreal as an engineer, the company had 400,000 telephones in service, assets of $77 millions. Since then, the number of phones on the system has mushroomed to over two millions and assets have sailed to over $700 millions.

Eadie climbed steadily through the organization during this period of exceptional growth. He stayed in Montreal until 1927, then spent the next 19 years in Toronto as, successively, division plant engineer, outside plant engineer, general plant supervisor, division plant superintendent and general plant manager of the western area.

In 1946, he returned to Montreal as assistant vice-president (operations), two years later became vice-president (operations) and in 1951 was made a director.

At one time Eadie played a fair amount of golf and took a keen interest in gardening. Since he returned to Montreal, however, he hasn't had much time for anything except work. On holidays (usually taken in the fall), he does manage to get in a little golf, also enjoys sea bathing and just "seeing the country."

He's married and has a daughter Dorothy, aged 22, who is a graduate geologist. His brother, incidentally, is a vice-president of Dominion Bridge Co.

* * *

Transit Rider's Champion

Sigurdur Sigmundson from Reykjavik.

That rather foreboding name and birthplace belong to a smiling, soft-spoken Icelander who has just been elected the new President of the Canadian Transit Association.

Transportation Operations Manager for the B.C. Electric Railway Co., Vancouver, Sigmundson — or as he is better known: "Siggy"—will head the national federation of Canada's major mass transportation companies.

"Because members of the Association are not competitive, the organization provides for a free and willing exchange of ideas — an effective meeting ground for the best brains in the industry," he says, describing the functions of his new job.

No "New Canadian," Sigmundson came to Canada in 1913, at the age of three. His father, who had been a carpenter in Iceland, settled down in Winnipeg to provide his son with a full education. After graduation from the University of Manitoba (Mathematics & Economics), young "Siggy" "stumbled into the transportation industry" by winning a scholarship appointment at Winnipeg Electric Co.

In 1942, on leave of absence from the company, he became Government Regional Director for Transit Control in British Columbia.

Captured by Vancouver's climate and skyline, he stayed on the Pacific coast at the close of the war, to become Transportation Assistant for B.C. Electric. He has managed the company's transit operations since 1949. Always a booster of the Association he now heads, he was Chairman of the Operating Committee in 1947 and Vice-President last year.

Spare-time activity has narrowed since his days at U. of Manitoba, when he starred on the hockey, soccer and baseball teams. Now he limits leisurely hours to an active Rotary Club affiliation (he's Sgt. at Arms this year) and mainly to spending time with his five youngsters (four boys and a girl).

He is Past President of the Vancouver Scandinavian Businessmen's Club and a member of the Terminal City Club.

"Business interests in urban centres are becoming conscious that public transit is increasingly necessary in maintaining "downtown values" and we are carefully watching "off the street" transportation developments to improve and speed up service," he says.

"It's going to be my job to help give voice to the seldom-heard transit rider," he adds.

* * *

High Score

Glory on arena ice led directly to a job as a "glorified office boy" for John Oxley Pitt. He played hockey for Riordon Pulp & Paper Co. (later acquired by Canadian International) in the now-defunct Pulp and Paper League after the first world war and skated right into his first job, with Riordon.

He's been scoring personal goals in the business world ever since. The Association of Canadian Advertisers recognized his sharp-shooting recently by making him president.

MR. PITT

John Oxley (that's his mother's maiden name) Pitt was born in Montreal in 1903, educated there and has lived in the city ever since. After two years with Riordon, he joined Liverpool & London & Globe Insurance Co. as publicity head and editor of their monthly magazine, a job he held for five years. In 1930, he joined Canadian Fairbanks-Morse and three years later was made general advertising manager. His present title as "advertising and sales promotion manager for C F-M "just grew."

He's still an active sportsman, but, perhaps in deference to a receding hairline, he has long since hung up his skates and hockey stick and confesses to keen interest in his "very average" golf and his membership in Montreal's Summerlea Golf Club. During the winter, you'll see him buzzing about the Laurentians on skis. He also finds relaxation as a director of a Montreal amateur theatre group, which puts on about five plays a year, so far without J. O. Pitt in the dramatis personae.

The quiet-spoken, sharp-featured advertising and sales promotion chief is a past president of the Industrial Advertisers Association of Montreal and a director of Montreal's Advertising and Sales Club. During the last war, he served in the Black Watch regiment (reserve) with the rank of captain and is still a member of the Black Watch mess. He's married, has no family.

What Others Are Saying

Editorial of the Week

Good News for Free World

Montreal Star

Things are going badly for the Red regime in Europe.

Satellites just do not like being satellites and the powerful and ancient force of nationalism is reasserting itself in eastern Europe.

From the immediate, short-run point of view, nothing could be better for the free world than this kind of news. It may be that, in the long run, nationalism prevents or retards sensible solutions of many problems. But, at the moment, it is serving to emphasize the eastern European hatred of the advance across its soil by the Red Army. If the Communist minority in western Europe sneaks out at night to plaster "Yankees, Go Home" on walls and pavements, the big anti-Russian majorities in the eastern marches are now demonstrating in more decisive ways their determination ultimately to get rid of the Russians and their dictatorial Communist regimes.

It is too much to hope that the Berlin rioting will turn into a successful German revolt against their Russian conquerors. Modern weapons of suppression in the hands of the Red Army will be enough to deal with the mobs. But the evidence that the spirit of freedom is so strong, will gravely disturb the Malenkov regime and its East German stooges in Berlin.

Other People's Views

PUBLIC LIBRARIANS are the real victims of these quiz programs, suggests the **Winnipeg Free Press.** "For a contestant to know the correct answer spontaneously is admirable; for him to peek in the back of the book is perhaps shrewd, but for him to ask a busy librarian to locate the book, look up the answer, and then not share in the prize, is surely not quite cricket."

LET'S HAVE far more immigrants, says the **Vancouver Sun.** "This country is still booming along industrially. We can't do our best lick without more people to handle the great industrial plant we are creating. So long as our population remains small, costs of production will stay high and in consequence we'll be handicapped in world commerce, as well as on our local markets."

OTTAWA'S SUPPORT of the cheese producers leads the **Winnipeg Tribune** to comment. "It might be expected that Ottawa's experience in the canned pork business—60 million pounds and no takers—and the horrible example of Washington stuck with a billion dollars' worth of dairy products, would make federal officials reluctant to venture further into the cheese business. But warnings and examples seem to be of secondary importance in an election year."

IT'S NOT GOING to be a walkover, predicts the **Victoria Colonist,** of the coming election. "St. Laurent's regime will not have the decision in its pocket . . . Far from it. Few among even the most seasoned observers can gauge the general feeling through the country with respect to the taxation, defense, control and other policies of the party in power. It is an attentive and a closely watching public that all candidates will face in the forthcoming test, and economic conditions considerably changed from what they were on the last occasion."

WE KNOW VERY LITTLE about the Canadian North, declares the **Ottawa Journal.** "There is not one up-to-the-minute, comprehensive, official publication dealing with all the Far North although there are scattered papers on various regions and various undertakings such as the introduction of the reindeer and the ancient dwellings of long-dead Eskimos. What we need at this time is much more than another advisory committee, helpful as that may be. What we must have is discussion of the North in Parliament, a public examination of its needs and its future. It is not enough for a modern nation to deal with problems as they arise, paint a piece of map red and say Canada's territory runs up to the North Pole. There should be imagination and foresight, and, most of all, a public policy Canadians at large can study and approve."

The Financial Post

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Member Business Newspapers Association of Canada

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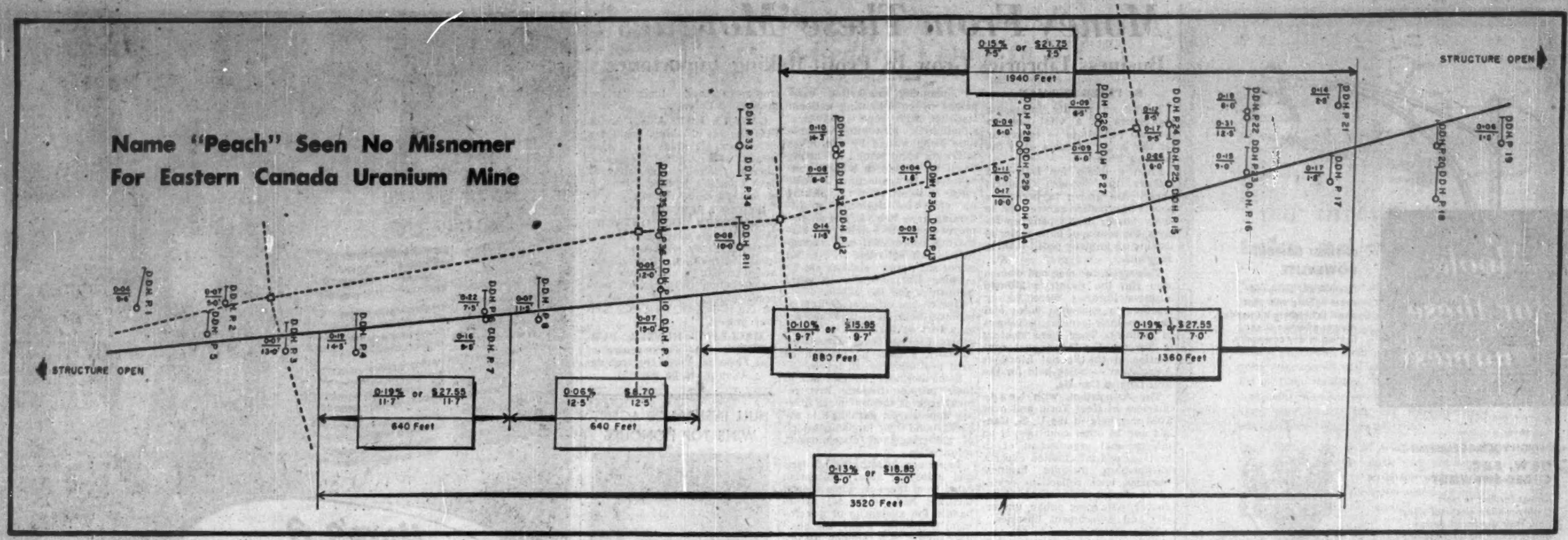
June 27, 1953



Major Uranium Find in Ontario

(Continued from page 1)

300-ft. intervals (depending on overburden conditions) over a strike length of 4,700 ft. This work produced these important ore lengths:

SUCCESSIVE ORE LENGTHS— WEST TO EAST

Length ft.	Width ft.	U_3O_8 %	U_3O_8 Content $/Ton
640	11.7	0.19	$27.55
640	12.5	0.06	$ 8.70
880	9.7	0.10	$15.95
1,360	7.0	0.19	$27.55
3,520*	9.0	0.13	$18.85

*Over-all length and averages.

First drilling was laid out for assessment purposes and has not delimited the structure, Franc R. Joubin, managing director of Technical Mine Consultants reports. All assaying has been done by chemical methods.

Later series of holes up-dip have not been fully completed as yet but have been returning similar results to first holes as indicated by map on this page. Incomplete assays have shown a length of 1,940 ft. along the part so far drilled averaging 0.15% uranium oxide over an average width of 7.5 ft.

The weighted average for all intersections, from all holes, is 0.12% U_3O_8 or $17.40 a ton over an average width of 8.8 ft.

It should be stressed that any average grade figure secured from holes spaced 200 and 300 ft. apart cannot be accepted as accurately representing the value of all material between such holes. However, the consistency of assays and widths and absence of high erratics between individual holes is so striking as to suggest that excellent ore-making conditions are present. Drill recovery, using the large size AX core, has been good and has received excellent confirmation from sludge assays. The arithmetic average of sludge assays from the 32 holes on which assay returns are complete is 0.28% U_3O_8 with a gross dollar value of $40.60.

Attention is now being given by the controlling interests to a corporate structure and financing commensurate with the importance of the discovery. Decision has already been reached to increase authorized capital to two million shares of 10c par value with 10 shares to be issued to present holders for each share held. Negotiations were under way Wednesday with one of the top mining companies in the United States and Canada with a view to completion of the major financing contemplated.

There appear to be two alternatives open to the management. A large operating company could be formed to take over the main discovery with one of the new company's shares issued for each new Peach share (10 shares for each present share). In this case, Peach would continue to hold valuable further acreage on strike and would have a million unissued shares in its treasury for financing purposes. Or Peach could finance on the basis of its own shares with a higher price tag on financing in view of smaller capitalization and additional acreage in which financing interests would participate.

Plans call for Peach ore delineation to be accelerated. The work program calls for this: Completion of shallow horizon cross-section holes; drilling of deep horizon holes to provide further information on depth picture; step-out drilling along strike. Work is to be stepped up to a two-drill basis to secure additional information as quickly as possible. Shaft work will come later.

The big drill-indicated uranium mine outlined by Peach Uranium & Metal Mining Co. just about 1½ miles north of Lake Huron and east of Algoma Mills (see p. 1), looks like this from a mining man's viewpoint.

Individual holes which combine to make up the ore estimate of 1,300,000 tons of $17.40 ore (assuming continuity between holes) are shown above. The deepest tier of holes, and the series drilled first, is plotted the lowest with individual hole values expressed as a percentage of uranium oxide, U_3O_8. Tabulated lengths, widths and values, are shown between the arrows.

Because of the relatively flat-lying attitude of the ore body, drilling can be done very quickly — over 30 holes have been drilled by one machine since April 1 with deepest hole going only to 182 ft. vertical depth to cut the zone 420 ft. down slope of the vein.

Drilling is to be continued using two machines, while four drills are expected to be operating in the area shortly.

Quebec Wage Settlements Void Pulp Strike Threats

MONTREAL (Staff) — New wage agreements signed by two large Quebec newsprint producers have removed the danger of strikes.

Consolidated Paper Corp. reports that its three mills at Port Alfred, Grand'Mere and Shawinigan Falls have just signed wage agreements with their local syndicates and the National Federation of Pulp & Paper Workers of Quebec. The agreements run to April 30, 1954, with a wage reopening clause Nov. 1, 1953.

The settlement, which follows strike votes taken at the end of March, gives a 40-hour week with a general increase of 12% and a new base rate of $1.41 an hour. The original union requests were for increases totaling about 33%.

The settlement includes back pay of six cents per hour from May 4, 1952 and also provides for increased shift differentials.

Agreement has been reached at Price Bros. & Co.'s mills at Kenogami and Riverbend, where strike votes were also taken earlier this year. There, the basic hourly wage is being increased to $1.38 and the work week reduced from 48 hours to 44 hours, effective June 25. The work week will be cut further, to 40 hours with a base rate of $1.41, if the syndicate request this between Aug. 1 and Nov. 1.

Meantime, in Ontario, officials of newsprint and kraft producers met with union representatives again this month but came to no agreement.

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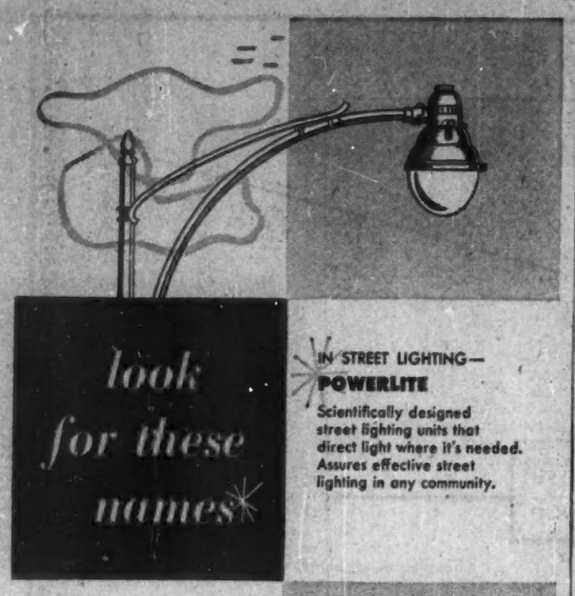

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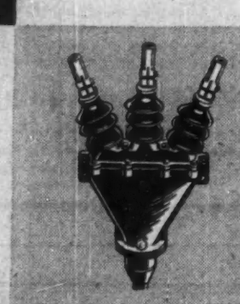

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Money From These 'Morgues'

Business Libraries Grow In Profit-Making Importance

By PETER NEWMAN

Taking on rapidly increasing importance as a vital unit in business operations — especially for the larger business — is the business library.

From a dump for little-used records the modern business library has grown to become a potent information centre vital to many phases of company operations, the source of basic material leading up to many profit-making decisions.

This week, the men and women who run the country's 200-odd business libraries were getting together to exchange notes and improve their general usefulness to business. They were meeting in Toronto for the annual convention of the Special Libraries Association — being held for the first time in Canada.

The Association, with headquarters in New York, and over 5,000 members in the U. S., Canada and 24 other countries, is an international organization of librarians and information experts. Membership includes business libraries, book collections devoted to almost every field of endeavor, plus some public, university and government libraries.

Main activities are to act as a clearinghouse for library information; arrange inter-library loans; develop library forms and record systems; publish lists of subject headings for data files; and survey relevant fields.

While it's difficult to enter a dollar-and-cents figure on the balance sheet, expressing the benefits of a good library, capitalizing on filled bookshelves can take many forms:

Helping to crack policy problems by crystallizing past trends . . . planning marketing campaigns by co-ordinating national statistics with reports on local situations . . . preventing valuable time being wasted by executives following blind leads . . . cutting down on expensive outside consultation by collecting a wide range of information . . . picking up otherwise neglected profit-making news items . . . as an employee-goodwill builder by furthering educational and recreational staff activities . . . as an important public relations aid by opening library doors to other companies and the public.

One charge often made against business libraries is that they act as a sort of luxurious reference centre for top level executives. Actually, a good library can be used profitably by all levels.

Some business libraries fail in their purpose because management regards them as mere literary appendages, pushing into the background their fundamental job of gathering and disseminating information.

Important impetus to business and industrial library formation came from the war, when special facilities had to be set up to handle the avalanche of government literature. Today, the business library is a common feature of almost every type of enterprise, with insurance companies, banks, public utilities, publishers, and manufacturers leading the parade. Trade associations, law firms and advertising agencies are other important library operators.

Who Owns Libraries

Here is a percentage breakdown of how business libraries, books, pamphlets and periodicals are spread between the five major groups:

TYPE OF INSTITUTION:	% of Business Libraries Operated	% Age of Total Reading Matter Owned: Books	Pamphlets & Periodicals
Banks	12%	21%	6%
Insurance Companies	22%	42%	3%
Public Utilities	20%	14%	9%
Manufacturing	38%	17%	9%

Nucleus of most new libraries is the reading material accumulated by individual departments through the years. Establishment of library facilities does not mean the spending of large sums for lavish furnishings. Nothing more elaborate than provision for free traffic flow, adequate lighting, and possibly some air-conditioning and sound-absorbing walls is required.

Probably the biggest stumbling block holding up formation of many business libraries is the hard reality of costs. Generalizations about budgets are difficult, as the bill for each operation depends on its purpose. But besides a fairly substantial initial investment, the perishable nature of today's printed word calls for the setting up of an adequate operating allowance.

A typical budget breakdown is 50% for salaries, a small allowance for binding and microfilming, and the balance split between book purchases and periodical subscriptions.

Most companies have their libraries organized as a compact, independent staff function. The intentional separation from management's line organization, it's felt, helps to extend equal service to all management levels.

While certain large company departments (legal, market research, etc.) still maintain their own libraries, there has been a distinct trend toward centralization. One reason has been the continually growing complexity of modern business, which often ignores departmental boundaries.

The Librarian's Job

Library benefits are not proportional to company size, but employ of a trained librarian is usually limited to the larger operation. The advantages of hiring a qualified librarian do not stop at the more efficient manner he or she will ride herd on the company book collection. Through experience, alternative sources of information can better be exploited; required data can be traced all over the world, as necessary.

Being a business librarian is much more than just pushing books at employees. A sound general reading background, as well as specialized knowledge on what's available in the field that most concerns company operations are essential. It's an interesting career, with advantages over work at public libraries including less night hours and more pay. Right now trained librarians are in short supply.

While many smaller colleges offer courses in library science, McGill and the University of Toronto are generally conceded to lead in the higher library education. At U. of T., there's even a Master's course which provides for study in other faculties. A summer diploma course for high school grads is also given at Toronto.

A helpful agency in seeking qualified librarians is the placement service operated by each chapter of the Special Libraries Association.

Here is a percentage breakdown of how major business library groups divide the total full-time business librarian employment in Canada.

TYPE OF INSTITUTION:	% of Total Full-time Business Librarian's Employed:
Banks	14%
Insurance Companies	20%
Public Utilities	11%
Manufacturing	22%
Publishing	13%

The special services performed by company librarians run to a long list. Here are some of today's popular practice highlights:

—Keeping individual records of executive interest and directing relevant clippings or article digests through appropriate channels.

—Supplying educational and recreational reading matter for employees. A house organ column usually publicizes this activity.

—Clipping and filing important articles to supplement books with up-to-the-minute information.

—Organizing rotating traveling library boxes within a widely dispersed company operation.

Majority of Canada's business reading facilities are clustered around Toronto—with 104 libraries — and Montreal — with 80. While each library differs with its purpose, here is a brief description of some of the larger and more important units:

In Toronto

CANADIAN BANK OF COMMERCE: Established in 1867, a comprehensive collection of professional and recreational reading is now made available to all bank employees and their wives throughout Canada.

CANADA LIFE ASSURANCE CO.: Besides providing books for staff members studying life insurance and its allied fields, this library generally considered to have Canada's leading collection of insurance law references.

HYDRO - ELECTRIC POWER COMMISSION OF ONTARIO: One of Canada's largest industrial libraries, every aspect of electricity generation, transmission and distribution, and public utility operation is thoroughly covered, also a special collection on the topical St. Lawrence Seaway project.

MACLEAN - HUNTER PUBLISHING CO.: Nerve-centre of The Financial Post's research de-

(Continued on page 9)

HULL INSURANCE AGENT WINS TOP HONOURS

THOMAS I. HULL

Thomas I. Hull, a member of the Hull Insurance Agency Ltd., 50 King Street West, Toronto, was graduated recently with the 28th Class of the Insurance Company of North America Companies' School for Agents. This is a course in the Principles of Property and Casualty Insurance conducted by the Company at its Head Office in Philadelphia, Pennsylvania. He won top honours in the Fire, Marine, and Casualty branches of the instruction.

Mr. Hull attended the School for Agents for the purpose of improving his knowledge of insurance to better prepare himself for the duties he has assumed as a member of the 10-year old Hull Agency.

Prior to entering the insurance business Mr. Hull received his education at Upper Canada College in Toronto.

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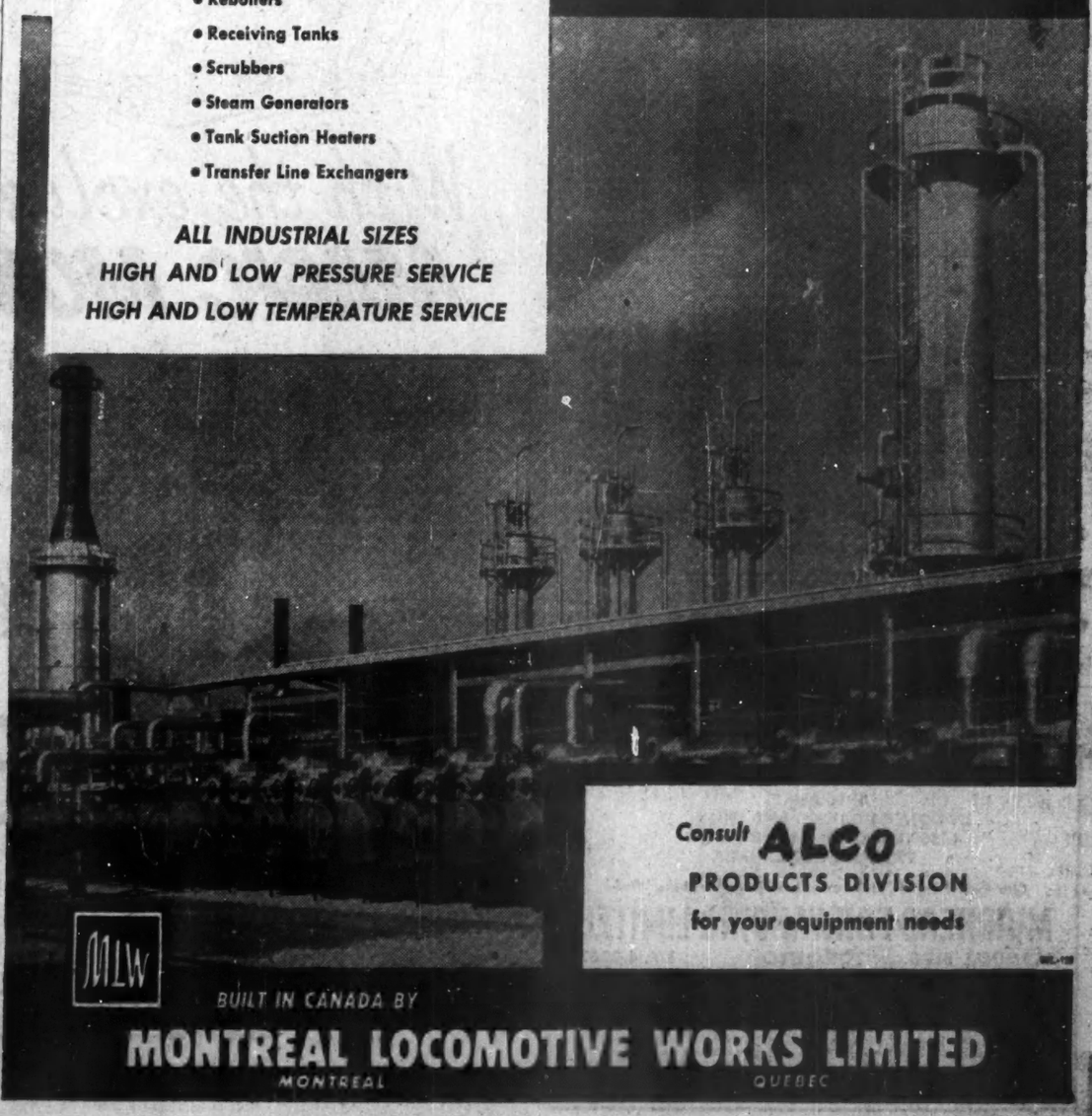

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Sandwell Here

By B. K. SANDWELL

THE CANADIAN AUTHORS' ASSOCIATION, which has just conferred upon me the distinction of honorary president, of which I am extremely proud, is now an organization of considerable age and dignity. It has two periodicals of its own, the Canadian Author and Bookman and the Canadian Poetry Magazine, administers the Governor-General's awards for literature and several other forms of recognition of distinguished literary service, and is in general the recognized body to speak in the name of the literary craft of Canada in the English language. A parallel body, the Société des Ecrivains Canadiens, performs the same function for French, and the two bodies often act jointly.

The C.A.A. was formed in 1921, mainly to maintain the interests of authors—not Canadian authors alone but those of all nationalities—in the drafting of the first Canadian-made Copyright Act, the legislation on copyright up to that time having been that of the United Kingdom with a few minor amendments. There was a very lively campaign being waged in favor of the adoption of a copyright law with strong protectionist elements in it, based upon the American law. This campaign was fortunately headed off and Canada has been and still remains a respected and respectable member of the International Copyright Union. Since then legislation has been a minor object of the Association's interest, and it has concerned itself chiefly with the business relations of authors and publishers.

The great price collapse occured not long after the Association was formed, and for years it was hard to get $2 a year out of the average Canadian author. Now they come across with $10 and don't seem to feel it.

Religion or Politics

I HAVE RECEIVED from the office of the High Commissioner for India in Ottawa a letter informing me that the statement that Christian missionaries in India must refrain from propagating the Christian religion or they will be required to leave the country is not quite correct. "So far the Government of India has not departed from its policies of strict neutrality in religious matters. Missionaries proceeding to India for specific social welfare activities will be welcome. But India cannot allow encouragement of anti-nationalist and separatist tendencies under guise of missionary activities. Evidence of such activities by some foreign missionaries has recently come to the notice of the Government and in view of this they have taken certain precautionary measures. This has nothing to do with religion as such. In any event, followers of all religions in India have complete freedom."

It would be helpful to have the text of the law or regulation referred to in this reference to "precautionary measures," but quite possibly it has not yet reached Canada. It seems to me that there is a large vacant area of conduct between the "encouragement of anti-nationalist tendencies" which is admittedly to be stopped, and the "specific social welfare activities" which will continue to be welcome. Somewhere in this vacant area —which presumably includes all religious propaganda which does not constitute "encouragement of anti-nationalist tendencies"—the line between the permitted and the prohibited has to be drawn. If it is so drawn as to allow of any Christian teaching (even by non-Indians) that does not actually encourage anti-nationalism, all will be well. And this column has never questioned the complete freedom of India of the Indian followers of any and all religions.

After all, moreover, the Indians may merely be taking a belated satisfaction out of the people who were responsible for the hymn about the spicy breezes which "blow soft o'er Ceylon's isle, where every prospect pleases and only man is vile." Between its hymns and its comic operas the English-speaking world in the nineteenth century was never very solicitous about the feelings of others.

Oh's and Zeros

THE OLD STYLE IMMIGRANT was usually a person who was terrified of a telephone because it was something that he had never had contact with in his European home. The new style immigrant is a person who knows all about telephones; but unfortunately he knows one thing about them that isn't so.

Over a large part of Europe the dial is so designed that the zero and the letter O are in the same hole. It is a not unreasonable arrangement, seeing that the printed sign for the two different meanings is exactly the same.

On this continent, however, the letter O is in the same place on the dial as the figure 6, and the figure O (zero) is in the same place as Z.

Europeans, not realizing that when O occurs as part of the exchange designation in a telephone number it is the letter and not the figure, insist on dialing Z; and conversely they often dial 6 (because the letter O appears there) when they ought to be dialing the figure O.

This is one of those things that nobody ever thinks of explaining to the newcomer. Another thing is the fact that in hand-written script on this continent the figure 7 is never crossed, as is general in Europe. Personally I think the crossing is a very sound idea, as it completely distinguishes 7 from 1, about which it is easy to be confused, or confusing.

How long it takes the newcomer to learn that on this continent a billion is only a thousand millions I do not know. Fortunately this is a figure which is of very limited use in the practical affairs of life, and if one stays clear of astronomy and government finance it should be possible to go quite a long way without ever using either the word or the idea.

FDR's Greatest Achievement

THE ORDINARY BIOGRAPHICAL WRITINGS concerning the late Franklin Delano Roosevelt are compelled to devote so large an amount of space to his innumerable public activities and responsibilities that the almost incredible psychological achievement of his conquest over his crippling polio sinks into the background. Yet in his history as a human individual that achievement is by far the most important section. It is what made all other achievements possible; if he had not been a polio victim Roosevelt might have been president of the United States, but he could never have dominated that nation as he did for 12 years, because his personality would never have been so compelling.

It is therefore good to have a well written book which deals with no other subject than "Roosevelt and the Warm Springs Story"—the tale of the late president's long connection with the thermal baths in Georgia which, under the scientific management and humanitarian policy which he established there, have done so much to restore the health and capacities of so many polio victims. The book is by Turnley Walker, himself a big, broad-shouldered polio case and a "graduate" of the "Springs."

Canadians will find special reasons for being interested in it, for one of the early adherents (1929) of the Warm Springs group was Leighton McCarthy, Canada's first Ambassador to the United States, and one of the most widely popular members of the Canadian business community. F.D.R. is of course the predominant figure in the book, but one gets the feeling that there was a lot of heroism widely scattered around among the whole community.

Money From These 'Morgues'

(Continued from page 8)

partment, this library contains a wide range of detailed material on Canadian companies, as well as a wealth of general data on the country's economy.

TORONTO STAR PUBLISHING CO.: Open to the public, this is the largest daily newspaper library in Canada. Over 20,000 personality files, 7,000 reference volumes and nearly 3,000,000 photographs make up bulk of the collection.

In Montreal

BANK OF MONTREAL: This 136-year-old library is believed to be the oldest business library in the country. It features an outstanding pamphlet collection.

BELL TELEPHONE CO. OF CANADA: Originally formed to further employee cultural interests, activities have now been expanded to technical material, business research and company-sponsored human relations programs.

SHAWINIGAN WATER & POWER CO.: Part of the company's public relations department, government documents, technical periodicals, and reference books are made available to outsiders as well as staff.

SUN LIFE ASSURANCE CO. OF CANADA: The largest business library in Canada, over 25,000 volumes and 2,000 periodicals and pamphlets are maintained to service the international aspect of the company's business. With a staff of 14, this is the most elaborate business library operation in the country.

Main Canadian business libraries outside Toronto and Montreal are at Kingston, Ont. (Aluminum Co. of Canada); Lachine, Que. (Dominion Bridge Co.); London, Ont. (London Life Insurance Co.); Sarnia, Ont. (Imperial Oil Ltd.); Trail, B.C. (Consolidated Mining & Smelting Co.); Winnipeg (Great West Life Assurance Co.); Guelph, Ont. (Dominion Rubber Co.); and Hawkesbury, Ont. (Canadian International Paper Co.).

A unique Canadian information centre is Toronto Public Library's "Hallam Room." Simple enquiries on any subject are answered by telephone; material is collected for more extensive research. While books cannot be taken away, a photographic service is available at a nominal charge.

With over 250 periodicals—some dating back many years—and texts on every aspect of business, industry and finance, a visit to the "Hallam Room" is a must for basic researchers studying Canadian business.

—Photo by Zarov

JEAN P. W. OSTIGUY

has been elected vice-president and director, Casgrain & Co.

How Net Pay Will Rise After July 1

Canadian employees will get a small increase in their "take-home" pay effective July 1. On that date employers deducting income tax from their employees pay at the source on behalf of the National Revenue Department will use the new scale of deductions giving effect to the income tax reductions in the last budget.

The changes in most cases will not be large. In his budget address Finance Minister Abbott said the reductions in tax would average about 11% when the new rates became effective after July 1—a reduction in the total tax for the whole year of about 5½%, because tax for the first half of 1953 is payable at the old rates.

Here are some examples of the take-home pay for several income brackets in three classes of taxpayers, single persons with no dependents; married persons with no dependents; married persons with two children of family allowance age for each of which an exemption of $150 is allowed.

MONTHLY TAKE HOME PAY
Single Man—No Dependants(a)
After Tax Deductions

Monthly Income	Before July 1	After July 1
	$	$
$100	97.30	97.60
200	177.70	179.95
250	217.20	220.45
300	255.25	260.00
350	293.25	299.80
500	408.75	419.45
670	666.40	682.15
Married Man—No Dependents(b)		
200	194.15	194.75
250	234.65	236.25
300	274.20	276.80
350	312.25	317.00
500	429.45	437.60
970	760.60	787.15
Married Man—Two Children of Family Allowance Age(c)		
200	196.80	199.00
250	239.40	240.50
300	279.45	281.55
350	318.95	322.35
500	434.95	442.55
970	769.35	794.65

Personal exemptions: (a) $1,000, (b) $2,000, (c) $2,000+300.

Bid For Control Of Consol. Litho

MONTREAL (Staff)—An offer to purchase the common shares of Consolidated Lithograph Manufacturing Co. at $12.25 a share has been made and accepted by principal stockholders holding a controlling interest in the company.

The offer was made by Toronto General Trusts Corp. on behalf of an unidentified client.

Consolidated Lithograph, of Montreal, is one of Canada's oldest lithographic businesses. It specializes in offset lithography, printing and the manufacture of folding boxes for packaging a variety of commodities.

Eaton Builds Wing On Maritimes Depot

T. Eaton Co. is building an extensive addition to its mail order building at Moncton, N.B. Estimated cost has been reported to be around $1 million.

The general contract has been let to Anglin-Norcross Ltd. of Montreal. Preliminary work has been started, and actual construction will begin immediately, company says.

Eaton's own architectural staff designed the extension.

Tough Fight For Old Parties In Federal Voting In B.C.

Special Correspondence

VANCOUVER—There is no question but that the defeat of the Liberal and Conservative parties in the B. C. Provincial election of June 9 leaves them with a very gloomy outlook, indeed, for the coming federal campaign.

At this moment, there is no really safe Liberal or Conservative seat amongst the 19 federal constituencies in British Columbia—and the Social Credit will go pell-mell after every one of them.

Premier Bennett and Finance Minister Gunderson are orthodox businessmen; on the provincial platform they flatly refused to talk about Douglasite Social Credit. A federal campaign—with a different set of issues—may give them some trouble, because about half the Cabinet are Socreds in name only while half are simonpure SC's nurtured in the doctrines of Aberhart and Douglas.

Bennett has avoided this angle like an ugly nightmare. Several months ago, Hon. Eric Martin, Minister of Health and Welfare, and an Aberhart disciple from away-back, got off some funny-money stuff at a meeting in Victoria. He was severely rebuked by the premier, who instructed all and sundry within hearing to do their public speaking on provincial issues alone.

On federal platforms, smart leadership might rivet public attention on Douglasite theories; this could create pain and trouble in the Socred ranks.

It is difficult to see how else the extraordinary situation that has developed in this province is to be met, in the federal as well as in the provincial field. The Socreds have an excellent organization, enthusiastic and rearing to turn loose and it is needless to add that all their elected members will take their holidays in August and spend them in the federal fight.

Last February, Mr. Bennett appointed H. Cark Goldenberg, Q.C., Montreal economist, to prepare a case for him for "better terms"—a better financial deal for B. C. than is provided under the Dominion-Provincial tax rental agreements. It is reported that Mr. Bennett is planning to appear in Ottawa in July to press for large federal spending in his home province. He might ask for $100 millions or so to finish the Pacific Great Eastern Railway into the Peace River country and to construct another pair of highways across the waist of British Columbia. It is assumed that Mr. Bennett is alive to what he might do in putting federal candidates on the spot on these matters.

At a recent meeting in the provincial campaign, Bennett said if he could get a fair deal from Ottawa he might be able to forego a plan announced by his government some months ago of assessing $4 millions in new taxes against timber, mines and other natural resources. This may have quite definite implications, now that the federal campaign is on.

New Train Ferry For CPR Run On West Coast

MONTREAL (Staff) — Canadian Pacific Railway plans to replace its existing tug and barge operation between Vancouver and Nanaimo, B.C., with a new train ferry.

The company has ordered a $4 million twin-crew diesel train ferry from Alexander Stephen & Sons Ltd., of Glasgow. The 7,000-ton vessel, with an over-all length of 416 ft., is expected to go into service in May, 1955.

The ship will be able to make three round trips daily on the short run across the Strait of Georgia, carrying 800 passengers and 28 railway cars or 110-120 automobiles or trucks or a combination of both. Railway cars and motor trucks will be loaded and unloaded through end doors located at the stern and new shore facilities are being provided at each end of the run so that traffic will be handled under all weather and tide conditions.

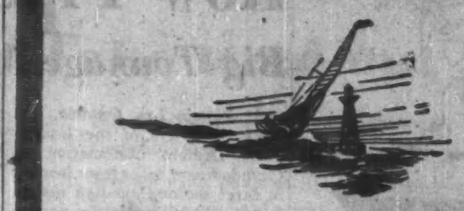
Canadian Pacific said it had hoped the ship could be built in this country but the difference in the cost was too great.

U. S. $ Value in Canada

Daily at Noon as Reported by The Bank of Canada

Week Ended June 19, 1953

Mon.	.99- 7/16	Thurs.	.99- 9/16
Tues.	.99-17/32	Fri.	.99-19/32
Wed.	.99- 9/16	Ave.	.99-43/80



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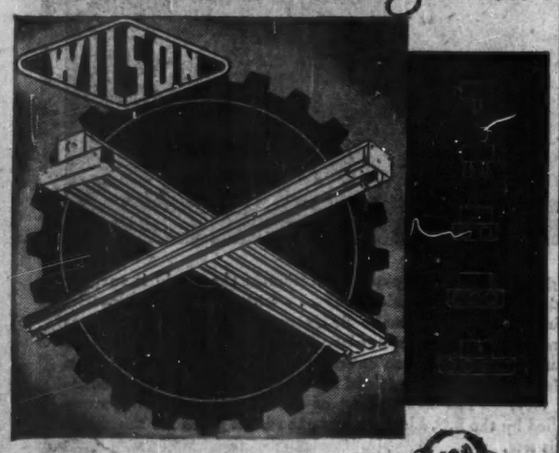

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In naval vessels, too — such as the fourteen minesweepers now being built for the Canadian Navy — aluminum is being used more extensively than ever before. Aluminum Company of Canada, Ltd. (Alcan).

How Pipelines Answer Oil's Problem

Big Tonnage Movement Brings Economical Transportation

At Bigwin Inn, Ontario, last week, members of the Investment Dealers' Association of Canada heard talks from leaders in three major Canadian industries — hydro-electric power, pulp and paper, and pipe lines. Here are digests of the speeches:

Oil Pipelines

S. M. BLAIR, vice-president, Canadian Bechtel Ltd., and vice-president, Trans Mountain Oil Pipe Line Co.:

There is now only a limited amount of equipment that cannot be provided in Canada for refinery and chemical plants (large diameter pipe, certain furnace tubing, alloy piping and plating, and large compressors and explosion proof motors). For pipe line systems, the plate for storage tanks is now made, the fittings are becoming available and the pipe up to 16 inches in diameter is produced in Canada (the large diameter pipe must still be imported).

There are about 25,000 persons engaged on regular oil operations —a small number compared with the capital invested or the value of the output. Supply of experienced engineers and craftsmen is improving.

Four years ago, oil reserves were put at 600 million barrels. Now they are estimated at well over 6,000 million barrels. In 1948, Canadian oil consumption was 280,000 bbl. daily and 1958 consumption was expected to reach 400,000 daily. Actual throughput being reached this year is 440,000 daily, or 10% above estimate for 1958.

The oil industry is a growing organism rather than a fixed business. The figures show the problem and the coverage industry leaders have had in determining how far the sights should be raised to determine the correct size of new plants, storage and transportation systems servicing this rapid expansion.

In addition to 14 new catalytic cracking plants which will be operating in Canada by the end of this year, the oil industry has provided Canada in three years with an entirely new transportation system—a pipeline system stretching from Montreal to Vancouver. It will move freight in quantities significant in comparison with that carried by the great railways or water shipping systems and at tariffs for which there is no competition.

A transcontinental railway in Canada in 1951 averaged 1,580,000 tons of freight for each mile of track. By the end of this year, Trans Mountain Oil Pipe Line will be handling about three times that tonnage per mile, and may ultimately handle eight to 10 times that railway tonnage.

The rails, fittings, sidings and terminals on a railway require about 282 tons per mile of fixed steel plus another 80 tons for rolling stock. A line such as Trans Mountain uses about 230 tons per mile. Per ton of freight, that's about one-seventh of that required for railway operations.

A pipeline system probably requires one-tenth the number of employees per mile used by the railway.

If we assume a general favorable railway freight of 21c per 100 lb. per 100 miles, over distances greater than 500 miles, rail tariff will be 7-10 times that required by a pipeline carrying the same tonnage the same distance.

There are two fundamental requirements which should be considered in the proposed natural gas pipeline projects:

(1) The gas must be able to reach the market at a competitive price with other fuels, and

(2) there must be a net back price to the gas fields adequate to make it attractive for the producers to produce gas as such and not merely that gas produced along with oil production.

To accomplish, if possible, these two basic requirements in our land of vast distances, the utmost must be reached in economical transport, particularly as regards location, capacity and design.

• • •

Hydro Power

R. L. HEARN, General manager and chief engineer, Hydro-Electric Power Commission of Ontario:

From December, 1945 to December, 1952, peak capacity of Ontario Hydro's resources increased by 1,415,850 kw or about 73%. By 1956, the new power developments will bring capacity to double the 1945 level.

The commission spent $793 millions on capital construction between Nov. 1, 1945 and the end of 1952. This year is expected to be a peak period with planned expenditures of $189 millions, exclusive of any outlay on the St. Lawrence power project. Value of fixed assets at Dec. 31, 1952 was $1,117,866,092 — 174% above 1945.

Of $870 millions of bonds issued to finance program since 1945 ($90 millions this year), $150 millions was in U. S. funds, transferred at an average premium of nearly 3%. In the same period, more than $68 millions of debt has been retired through operation of the sinking fund.

Because of the delay in reaching a decision on the St. Lawrence seaway and power project, the Commission in April had to announce additional construction at Niagara to meet estimated peak load deficiences in 1957.

Present plans call for a 12-unit development with an installed capacity of 1.2 million hp. The new work to be undertaken includes creation of a water storage reservoir and pumping plant, adjacent to the new canal, widening of the part of the power canal now being excavated. The storage provided makes it economical to install four additional 100,000 hp generating units as required for short time use in supplying peak load.

Construction of the additional facilities at the new Niagara project does not obviate the urgent necessity of power from the St. Lawrence. St. Lawrence power is cheaper than the new Niagara power and will be needed after 1957. If it were possible to start the St. Lawrence project by next spring, the initial units could be in service by the fall of 1958, with the remaining units brought in progressively to meet load demands to the end of 1962.

• • •

Pulp and Paper

R. M. FOWLER, president, Canadian Pulp & Paper Association:

The operating rate of the pulp and paper industry is high. Given continuation of current levels of economic activity in Canada and the U. S., it is reasonable to hope that pulp and paper will be carried along at a high level of demand, but not likely at the level of expanded capacity.

The largest single item, newsprint, is actually running ahead of last year, at an all-time record level. There could be a period of inventory adjustment, and certainly expansion of capacity, particularly in Canada, has ended the newsprint shortage. There is every prospect that a high operating rate will be maintained, but we are unlikely to see year after year operating rates running higher than rated capacity.

In other branches of the industry, there have been some declines, mainly in the export market for pulp and in the relatively small proportion of paperboard and fine papers that are exported. First quarter operations of the non-newsprint section of the industry were down about 15% from last year.

Some of the strengths that have appeared in the industry in recent years include greater diversification of products and markets; stronger financial positions of producers, mainly through plowing back earnings; greater market stability; increased emphasis on research.

The problems the industry faces arise mainly from high costs and their solution can only be found in reduction of costs. Profits were substantially lower in 1952 than in peak 1951, and in 1953 are generally down from a year ago. It would seem unlikely that, with demand below capacity, the solution can come from price increases — at least, for many products.

All costs are high. In Eastern Canada, wood costs are probably the highest in the world. Government levies — income taxes, ground-rents, fire dues and cutting rates which go into the cost of pulpwood—are also high. Labor rates are high and under pressure to go higher.

This is overwhelmingly an export industry. There is already considerable evidence — particularly for the most sensitive indicator, the market pulps — that Canadian costs are not fully competitive with those in other producing countries. It will be an empty achievement if government charges attain record levels on wood that does not have to be cut, or if labor rates are advanced for men that are not working.

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The Bank of Canada announces the appointment of the following regional directors for Payroll Savings Plan Sales of Canada Savings Bonds in the new series to be offered to the public in October: Clyde Watt, manager of Eastern Securities Co. Ltd., Halifax, regional director for the Atlantic provinces since 1947; Gerard Gingras, of Rene T. Leclerc, Inc., Montreal, new president of the Investment Dealers' Association, director for Quebec and associated with Payroll Bond Sales since the first series in 1946; N. D. Young, Dominion Securities Corp., Toronto, director for Ontario, has been associated with government's public loans during the war and Canada Savings Bond sales since then; Sydney C. Stephens, James Richardson & Sons, Winnipeg, director for the Prairie Division, is vice-president and chairman, Mid-Western District, IDA; George D. Sherwood, partner in Thomas B. Read Co., Vancouver, director for the British Columbia divisions, has been associated with the campaigns of the past three years.

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Camera Eases House Selling

To ease the footwork and speed house-sales, Ernest Ridout Real Estate Ltd. has inaugurated a 24-hr. photo listing service for the Toronto area after successful trial of the service in their Peterborough, Ont., office.

Now, within 24 hours after a house is listed for sale by the company, a photograph of the house is taken, the photo printed by multilith process and the salesman can show his client a folder of photographs of all houses listed.

The Peterborough service showed this sales method cut considerably time of both the client and salesman.

Distill.-Seagrams 3-Month Net Dips

MONTREAL (Staff) — Distillers Corp.-Seagrams Ltd. consolidated net profit for the three months ended April 30, 1953, totaled $6,532,658, off 17.6% from $7,92[illegible]04 in the same period of last year.

Profit after all operating charges dropped to $13,832,658 from $16,024,604, while income and excess profits taxes were lower at $7.3 millions ($8.1 millions).

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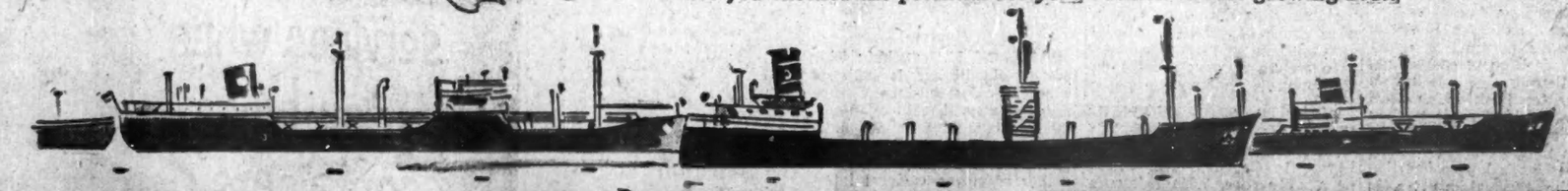
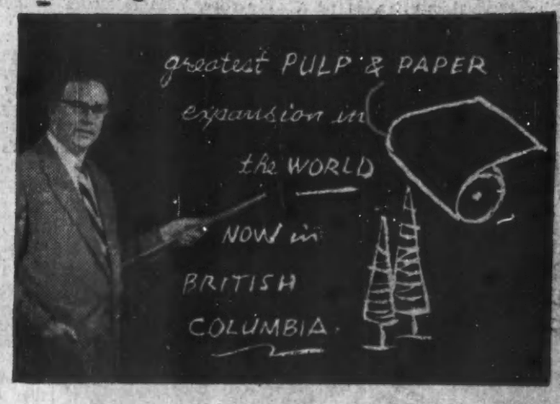
Up and down B.C.'s coast the deep-sea harbours are busier than ever before, with cellulose, pulp and paper ports reporting the richest output in the province's history. Soon, more and more oil tankers will swell the freighter fleets eager to carry the production of B.C.'s multi-million dollar refinery expansion — golden offshoot of the $92,000,000 Edmonton-Vancouver pipeline. The coming of new industries like these and the expansion of established industries have brought new payrolls—created new markets that in turn are attracting secondary industries. Have you checked the potential for *your* business in fast-growing B.C.?



"With a great wealth of natural resources, the fastest-growing population in Canada, and tremendous reserves of potential hydro power, British Columbia offers excellent prospects for growth to firms locating here now in a period of development which has caused the B.C. Electric to more than double its generating capacity in the past five years."

Oil and Gas are both rising giants in B.C.'s phenomenal industrial development. With the oil pipeline from Alberta's famous fields to B.C. tidewater nearly completed, the next headline-making news will be the go-ahead signal for the introduction of natural gas into B.C. One of Canada's biggest proven fields, the Peace River Block, has more than 2.5 trillion cubic feet of natural gas awaiting a pipeline to the Coast for its commercial development.



The greatest pulp and paper expansion in the world is surging ahead in British Columbia today . . . with secondary industries keeping pace to help make B.C.'s new industrial economy as diversified as it is spectacular. Now, British interests have announced they plan to invest $175 million in a long-term development of Annacis Island near Vancouver as a new "industrial city." The availability of all necessary hydro power, supplied by the B.C. Electric, was one reason given for the choice of this site.

A. E. Grauer
A. E. Grauer,
President, B. C. Electric

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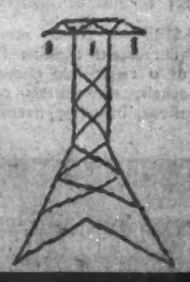

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How Best Tap Northern Resources?

The Question: On what problems of development and conservation should the new Ottawa advisory committee on Northern Canada focus attention?

Canadians are conscious of the bulging potential of Canada's great land and lake mass under the northern lights and they have some definite ideas on how to go about tapping it, answers to The Post's Question this week indicate.

Many respondents find common ground in agreement that a communication network, particularly transportation, is one of the important keys. Another important approach, several point out, is improvement of the social lot of the existing Eskimo population, as a living cornerstone for growth. Agricultural development can play a major role here.

In general, respondents say there's a need for a comprehensive survey of what we have — in minerals, forests, hydro power potential and other resources — as a basis for development by private enterprise. And with it all, we must keep one eye — today a more experienced eye — on conservation.

• • •

GORDON C. ALLISON, Editor and Manager, The Daily Miner, Flin Flon, Man.

If the Ottawa committee hopes to develop Northern Canada to its gargantuan potential, prime emphasis must be on hydro electric power and world markets for vast natural resources. Ottawa and the provinces should negotiate with larger mining and pulp and paper firms and together plan northern industrial areas with strategic hydro plants. Only in this way will the North's two greatest needs be satisfied; power and people.

Hydro development and industrial development must work hand in hand to achieve this goal. Northern Canada can never be heavily populated unless future inhabitants can be offered comforts of modern living, which is only possible with large scale development. Conservation is a simpler problem as most large firms have long practiced such measures.

• • •

DR. E. S. ARCHIBALD, Former Director, Experimental Farms Service, Ottawa.

I just returned to Canada and am not familiar with terms of reference or personnel of the new committee on Northern Canada. I presume it will lay special emphasis on mineral development and military strategy. In the McKenzie Basin and Yukon, the agricultural potentialities are being explored by experimental farms, and I think this should be enlarged for needs of present and future populations in development and emergencies. I consider experimental farms the best channel for such.

• • •

SENATOR CHARLES L. BISHOP, Ottawa.

My personal knowledge of Northern Canada is far from vast, but I should think that the committee appointed by the government to advise on the problems of that great territory might very well concentrate mainly on these points:

(1) The development of mining since the geological reports describe the north country as a "storehouse" of potential wealth;

(2) The development from abundant sources, of the hydro-electric power essential to mining and under what authority, public or private, this should be done and also to what, if any, extent power should be exported;

(3) Measures for making these territories more habitable for new settlers; and

(4) To advise whether the boundaries of the adjacent provinces should be extended or a new northern province possibly created.

• • •

P. BURKE-GAFFNEY, Past-President, Dom. Council of Prof. Engineers, Winnipeg.

The Ottawa advisory committee on Northern Canada should provoke, under government auspices, a wide scale appraisal of the human and natural resources with the object of facilitating their eventual development by private enterprise. The program should include a study of the mode of life of the indigenous inhabitants for its adaption to temperate zone standards of living, with special reference to food and housing.

It should lay the groundwork for a forward-looking plan of arterial and distributive transportation which is essential to development and conservation. Its guiding principle should be development to extend the civilized frontiers of the nation and not exploitation.

• • •

W. A. CAMPBELL, Vice-President and Secretary, Canadian Westinghouse Co., Hamilton.

Canada's strategically located Northland with its three-fold supply of water power, forests and mineral wealth is fast becoming a focal point in Canada's economic development. Apart from conservation measures, there would seem to be two major problems in the development of these resources: finding capital, preferably from Canadian sources, and the provision of adequate transportation facilities to reduce otherwise prohibitive costs of development.

The role of this area in the defense of North America will undoubtedly be another important problem for study by the advisory committee.

• • •

E. S. CARPENTER, Prof. of Anthropology, University of Toronto.

If the Arctic is to become the air crossroads of the world, then an acclimated, native population will be of tremendous advantage, and the surviving handful of Arctic Eskimos, even though no more than the equivalent of a small town, is worth saving. Yet these Eskimos now face a very dismal future.

Shipments of relief food, charity, feeble efforts at developing native crafts and curio production, more education, and a paternalistic policy on the part of the government offer no real solution. A practical, intelligent plan for domesticated reindeer herding, employment on weather stations, the development of a sound fur industry, or creation of a market for sea mammal products might make it possible for them to recover and build a sturdy Arctic population.

• • •

J. A. GILBEY, Superintendent, Experimental Farm, Fort Simpson, N.W.T.

With the improved and more aggressive national health program, native population in Northern Canada appears to be increasing. This trend, coupled with declining fur markets, is reducing an already low standard of living. The development and conservation of this population requires a supplement to their economy. Limited agriculture can be that supplement.

Trained leadership is necessary to foster new ideas and show rising generations the way of greater self sufficiency. Gatherers of vital statistics and distributors of relief in such vast but sparsely populated areas cannot perform this function. A practical agricultural school with an itinerant extension worker may be an answer.

• • •

IAN C. MACDONALD, Associate Editor, Edmonton Journal; Edmonton.

The North's future lies primarily in mining. The key to expansion is cheaper transportation. While greater efficiency and increasing volume should gradually reduce air costs, solutions must be sought mainly in railway construction, growing use of northern coastal waterways, some road building. Practicable rail and water routes and ports need surveying.

Eskimos and Indians must be saved from civilization's diseases and should be fitted into somewhat altered roles, suited to them in a changing North.

Conservation of musk-oxen is vital. The reindeer experiment, only a partial success, needs thorough re-study. The two could be the North's livestock. Further scientific studies of them and Mackenzie Valley agriculture and perma-frost problems are required.

• • •

DON SNOWDEN, Sask. Tourist Bureau Supervisor, Regina.

The main development problem facing the advisory committee would seem to be that of land transportation.

Lacking accessibility, the North with its vast natural resources will continue to be relatively unknown and undeveloped. Population will remain below that necessary for the establishment and development of potential northern industries. In addition, without adequate transportation facilities the vast summer recreational potentialities of Canada's Northland will not be utilized.

But any industrial development in Northern Canada must go hand-in-hand with conservation of natural resources. A detailed and rigidly enforced conservation policy providing perpetual protection for expendable resources such as forests, fur and fish must be one of the committee's major considerations.

• • •

J. B. STIRLING, Vice-President, E. G. M. Cape & Co., Montreal.

I suggest initiating a comprehensive and continuing study of the fishery and related resources in accessible Arctic waters, notably Hudson and Davis Straits and Hudson Bay. Also a broad program of research in inland fisheries of the Northwest Territory to establish over-all fisheries food potential for the support and expansion of the native population and for defense and commercial production.

Initiate for the forests of the tributory to the Mackenzie Valley, especially forests of the Liard River and its tributory valleys in Yukon and British Columbia, forest surveys and conservation measures modeled on work now in hand in the foothills, forests of Alberta. The Liard forest is the only large source of continuous timber supply natur-

(Continued on page 12)

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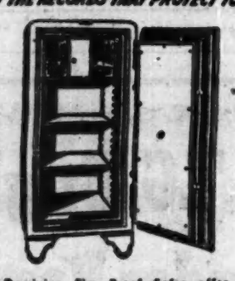

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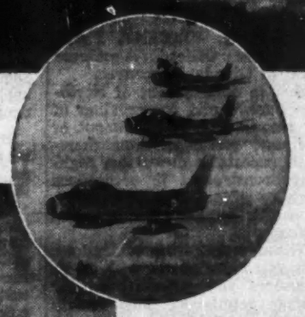

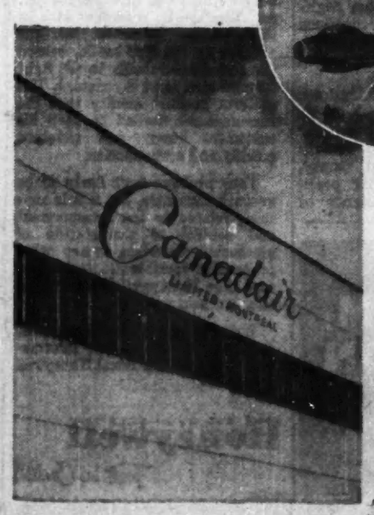

- Aerial photo of F-86 Sabre Jets in flight; manufactured by Canadair Limited.
- One of Canadair's New Warehouses illustrating the pleasing architectural lines of Turnall Trafford Tile
- Section of Canadair's huge main plant sided with Trafford Tile

63-30

CANADAIR BUILDINGS

The Trend to Lighter Sidewalls

The immense Canadair Plant in Montreal and the spacious warehouse buildings are sided with "Turnall" Trafford Tile and are insulated with Sprayed "Limpet" Asbestos. The new warehouses on the East side of Decarie Boulevard, with a connecting tunnel under the roadway to the Plant, became necessary when greatly expanded operations called for the transfer of stockroom space to manufacturing area.

These buildings, as well as the Plant itself, demonstrate the trend to lighter, dry wall construction which permits the use of lighter steel members.

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53-16

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LABOR ROUNDUP

By TREVOR LLOYD

Unions Don Political Gloves

CCL Is Open CCF, TLC Raps Government Record

With the federal election only six weeks away, Canada's two big labor bodies are starting to warm up their political machinery.

The Canadian Congress of Labor reports "interest in political action is reaching new heights" while the Trades and Labor Congress, looking over legislative gains labor has enjoyed from the present government, decides it has not been "liberal to workers."

Traditionally, the CCL has always been far more active politically than the TLC. The CCL has openly supported the CCF party while the TLC has not publicly supported any party.

There has been little collusion between the two in the past for legislative gain. Exception was the campaign two years ago for price controls. During the past year, the two have been clamoring for a national health scheme. This also happens to be a main plank in the CCF's federal platform but isn't being taken as a sign that the TLC is tying itself to the CCF in any way.

On the other hand, the TLC is criticizing the Liberal Government in a slightly more serious way than is usual. The official TLC Journal says of legislative gains from the Federal Government:

". . . Workers can now size up their legislative gains. The working people got a few requests granted but certainly not enough to holler about. What they looked for and didn't get was plenty. None can say that 'big business and finance' did anything but very well."

With an eye on the lush civil service field, the TLC Journal says civil service salaries are still 20% below comparable positions in industry though, it claims, the Federal Government had said earlier it would keep them on a par, later said they would be a few points lower. The Journal adds: "Even the Government's best friends could not argue that they were model employers . . ."

Though this criticism is sharper than it has been in the past, there are no signs that the TLC will go all out supporting another party. That will be left to the CCL where Political Action Committees are working hard in almost every centre.

Ontario CCL unions are particularly active. Financial support is reportedly being received on a regular basis, with Steel having adopted a regular per capita tax for PAC contributions.

• • •

UAW Busy

While top officials of the United Auto Workers were busy with Chrysler and General Motors negotiations this week, other union officers were busy with smaller contracts.

Employees of Canada Skate Co., Kitchener, Ont., continued their six-week strike for dues check-off plan; two locals National Pressure Cooker and Dominion Die Cast in Wallaceburg, Ont., were still carrying on their strikes which began in March and April respectively. First UAW strike in Western Canada started May 22 at Carter Motors Ltd. when 120 walked out demanding more money, better working conditions and additional union security.

UAW is having troubles at the new Ford plant in Oakville. Biggest headache for the union is when to apply for certification. With the work force increasing, the union may not have the required number of employees signed by the time the application is considered by the Labor Relations Board though a majority belonged to the union when the application was made.

Pay boosts of 5½c for men and 3½c for women workers at Duplate Canada Ltd., Oshawa, were contained in a UAW agreement signed recently. Base rate is now $1.42. Other benefits: reduction of work week from 44 to 42 hours with no loss in take-home pay; incorporation of 5c of the 11c cost-of-living bonus into basic rates.

• • •

URW Talks Start

Talks between United Rubber Workers and major Canadian rubber companies are to get under way within a few days. The contract at Goodyear expires July 1; Firestone, Goodrich and Dominion agreements end a few days later.

A 20c hourly pay demand is expected to be most important item in negotiations, with some improvements in welfare benefits, greater holiday allowances and increase in shift premiums.

The URW is aiming at parity with U. S. wages in asking the big pay hike; Canadians are still 40c to 50c below their U. S. counterparts; but this is the first step toward closing up the gap.

The 27 URW locals in Canada have a total of 15,000 members.

• • •

B.C. Fishing Settlement

The one-week fishing strike in B. C. has been settled with the Red-led United Fishermen and Allied Workers' Union signing with the industry on salmon prices.

Minimum prices settled on were: sockeye, 22c (the union wanted 26c, the operators offered 18c, last year's price was 25c); cohoe, 11c (1952 price 18c); pinks, 7¼c (1952: 8½c); summer chums, 5½c; fall chums, 8c in some areas, 6¼c in others.

The strike tied up about 1,500 gillnetters. By July, if the strike had continued, an estimated 5,000 to 6,000 fishermen would have been idled, along with another 4,000-5,000 workers in processing plants.

• • •

Labor Briefs

A large chunk of heavy construction in the Toronto area ground to a halt Tuesday when the truck drivers, who wheel the big ready-mixed concrete trucks, went out on strike. The pay issue was settled with a 15c hourly increase but the union balked at the suggestion of $60 a man to compensate for retroactive pay. The 15c offer would have brought rates from $1.25 to $1.40 an hour.

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A resolution calling for a 30-hour week has been prepared by the Winnipeg TLC for presentation to the national convention which opens Aug. 10 in Ottawa. Another Winnipeg resolution asks that all statutory holidays be observed on Mondays.

• • •

Settlement was expected within a few days at Chrysler but negotiations were expected to go on for longer at General Motors. No serious trouble is being looked for either in Oshawa or Windsor this year.

DOUGLAS O. PRICE, P.ENG.

whose appointment as manager of a new Toronto regional office has been announced by Omer E. Guevremont, manager, Marine Industries Limited, Heating Division. The Toronto office will be Ontario headquarters for distribution of Dravo Counterflo heaters, made by Marine Industries in Sorel, P.Q.

Mr. Price, a member of the American Society of Heating and Ventilating Engineers, brings to his new post more than 30 years' experience in the heating and air conditioning field. Starting his career with McClary Manufacturing Co. in Hamilton, he went later to its Brantford subsidiary, Happy Thought Foundry Co. On formation of General Steel Wares Limited, he came to Toronto to head its Heating and Air Conditioning Division. For the past seven years, he has been vice-president and a director of Price Air Conditioning Co. Ltd., Toronto. *

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What's Best Way To Tap Our Northern Resources?

(Continued from page 11)

ally located to serve whatever future industries may develop in the Mackenzie Valley.

• • •

LEO SWEENEY, Immediate Past Pres., Evergreen Playground Assoc., State of Washington and Vancouver, B.C.

New advisory committee should focus attention on better roads, better water transportation, and clean and comfortable accommodations. They should spend much time on the ground and not too much in swivel chairs because the potential resources of all Northern Canada are simply fabulous and far beyond average imagination.

Base metals and tourist traffic should be the main targets and as Canadians in 1952 spent 10 times as much per capita in United States than Americans spent in Canada there is an excellent opportunity to increase our tourist revenue many times over if proper facilities are provided, and always remember that all tourists are prospective investors or settlers.

• • •

GEORGE G. VINCENT, Public Relations Officer, Aluminum Co. of Canada, Vancouver.

Key to development of Northern Canada and conservation of its resources is establishment of adequate communications therewith, especially all-weather highways constructed in accordance with co-ordinated national needs of trade, industry, tourism and defense.

Without such communications, this vast half-Canada, with all its treasures and potentialities for human population, must remain largely unexploited and empty, and the solution of other problems within the competence of the advisory committee, must be to some degree incomplete or academic. Initial deliberations should therefore be focused to give this vital matter top priority, with determination for early and comprehensive action.

IMPERFECT PRODUCT HARMS TOBACCO SALES

A very large Canadian cigarette manufacturer had a problem. Cigarette papers were breaking open and the tobacco was spilling out. Usually the inspectors caught faulty products before they were shipped from the factory—but it was impossible to catch them all. The manufacturer realized that this could lose a lot of customers . . . one bad cigarette could spoil a thousand sales.

The problem, tracked down to the glue used to stick the cigarette papers together, was an easy one to solve. The temperature of the glue was varying and causing variations in the adhesive quality of the glue. Some way had to be found to apply the glue at its best sticking temperature.

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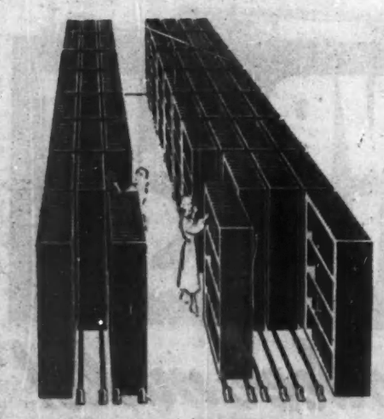

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Trend of Business

Money supply — currency and active bank deposits — up 7% over year ago.

Department store sales in week ended June 13 down 4.5% from corresponding week of last year. Sole gain: Saskatchewan, 12%. Decreases: Maritimes, 8%; Quebec and Ontario, 8%; Alberta, 2.5%; B. C., 1.5%; Manitoba, 0.5%.

Sales for month of May 1% higher than same month last year. Gains: Saskatchewan, 4%; Quebec and Ontario, 3%; Alberta, 2%. Decreases: Maritimes, 6%; Maritoba, 4%; B. C., 2%.

Tonnage of freight loaded on railways this year to June 1 estimated 4% below same period last year.

Newsprint production this year to June 1 down less than 1% from same period last year. Month of May down 3%. Shipments to U. S. down 7% in May, but up a shade year to June 1.

Retail trade in April 9% above same month last year.

Cut tobacco released for consumption this year to June 1 8% less by weight than same period last year. Cigarettes released up 19%, however; cigars, up 27%.

Instalment accounts receivable by retailers at beginning April 130% above same time last year. Charge accounts receivable up 19%.

Retail instalment sales first quarter rose 38% over same period last year, while total retail sales rose only 8%.

Cement production this year to May 1 18% above same period last year.

Douglas fir plywood shipped to domestic market this year to May 1 59% ahead of last year. Export market — small part of total — down drastically.

Leather footwear production continues steady, 10-month-long climb, with first quarter this year 21% above same quarter last year, in number of pairs.

Trade in outstanding securities between Canada and other countries in April followed broad 1952 pattern: outflows of capital for repurchases from U. S. of government bonds (mainly provincial issues in April) offset by net sales of securities of Canadian corporations to U. S. and overseas.

Major Weekly Indicators

	Latest Week	Week Ago	Month Ago	Year Ago
Department store sales (% ch. from year earlier)	—4.5	—16	+9	+15
Carloadings, total ..... (cars)	74,476	111,112*	79,492	82,916
Eastern Canada ..... (cars)	47,562	71,626*	51,230	54,131
Western Canada ..... (cars)	26,914	39,486*	28,262	28,785
Iron & steel products ..... (cars)	1,357	2,311*	1,666	1,943
Ores, concentrates ..... (cars)	2,501	3,757*	3,671	4,074
Base metals	641	840*	995	623
Lumber, timber, plywood ... (cars)	2,803	6,112*	3,812	4,171
Cement	1,083	1,452*	1,249	....
Motor vehicle prod. ..... (units)	11,899	11,786	12,177	10,821
Bank of Canada holdings of				
Securities ..... ($ millions)	2,246	2,229	2,231	2,059
Short term governments ($ millions)	1,386	1,378	1,390	1,234
Long term governments ($ millions)	847	835	826	814
Other securities ..... ($ millions)	16	15	15	11
Bus. failures (4-wk. moving av.) (no.)	17†	15.5	18.5	29.3
Canadian Dollar (U. S. cents, average)	100.465	100.616	100.558	102.125
T.S.E. industrials index	301.44	297.64	309.90	316.09
Bank Clearings				
Montreal ..... ($ millions)	426	420	421	450
Toronto ..... ($ millions)	497	479	416	527

*Ten-day month-end period.
†Last issue's data; latest available.

Facts by the Month

	Latest Month	Month Ago	Two Mos. Ago	Year Ago
WHAT WE PRODUCE—				
In all industries (Index)	247.9	241.7	232.1	222.2
—In factories (Index)	243.3	237.9	245.6	238.2
Total nondurable goods (Index)	221.1	213.9	203.4	205 9
Food & bev (Index)	195.3	183.6	181.5	192.2
Textiles (Index)	208.6	199.4	194.6	196.1
Clothing (Index)	183.7	177.9	170.3	152.5
Chemical products (Index)	278.1	279.0	269.4	274 6
Total dur able goods (Index)	334.3	326.7	311.7	288.6
Iron & steel products (Index)	304.2	297 6	292 5	301.2
Primary iron & steel (Index)	334.4	312.1	322.9	317.1
From mines (Index)	161.7	162.6	164.6	146.8
Metals (Index)	118.0	119.8	118.0	112.2
Nonferrous smelting, refining (Index)	238.4	232.5	229.2	218.1
Gold (Index)	103.9	109.2	104.2	102.2
—from farms				
Hogs graded (000)	399	462	553	533
Cattle delivered (000)	119	126	132	116
Flour (Index)	161.4	159.2	139.5	158.1
—From sea				
E Coast catch ($000)	2 031	1,216	1,017	2,530
W. Coast catch ($000)	335	231	234	441
—From forests				
*Newsprint (000 tons)	480	480	484	496
Pulp (000 tons)	743	745	669	741
—In powerhouses				
Electricity (Index) (seasonally adjusted)	254.3	252.5	250.5	229 6
WHAT WE SELL—				
*Retail sales ($ millions)	1,016	914	725	935
*Dept. store sales ($ millions)	88	76	77	84
Country store ($ millions)	37	34	26	40
Wholesale sales (value) (Index)	306.6	349.1	304.4	26..9
Pass. car sales (units)	39,543	30,254	23,130	23,008
WHAT'S ON HAND—				
Mfrs. inventories (value) (Index)	183.2	185.4	184.0	187.3
Dept. store stock/sales ratio	3.5	2.9	3.2	2.7
SPENDING, SAVING POWER—				
Labor income ($ millions)	928	926	931	863
Dividend payments (Index) (anaual rate)	245 4	245.3	244.1	247.3
JOBS—				
Employment (Index)	181.8	182.0	182.5	177.9
Mfg. employment (Index)	200.8	199 5	197 6	188.3
BUILDING—				
Contract awards ($ millions)	182	273	149	176
FOREIGN TRADE—				
Exports ($ millions)	305	313	280	352
Imports ($ millions)	293	360	310	324
MONEY—				
*Money supply ($ millions)	5,208	5,041	5,001	4,782
Cheques cashed ($ millions)	11 290	11,894	9,503	10,437
Savings deposits ($ millions)	5,107	5,067	5,008	4,737
Current public loans ($ millions)	3 372	3,262	3,181	2,800
Life insurance sales ($ millions)	205	232	204	194
PRICES—				
Consumer price Index	114.4	114.6	114.8	113.9

Index bases: production, wholesale sales, 1935-39=100; employment, payrolls, 1939=100; manufacturers inventories, 1947 average=100; consumer price index, 1949=100.

STRATEGIC MATERIALS—Production and Supply—

	Latest Month	Month yr. ago	Yr. to date	% chge. yr. to date
Steel ingots and castings (000 tons)	267	339	1,040	+9
Net imports, primary shapes (000 tons)	87.7	150.8	189.3	—40
Primary copper (000 tons)	22.2	22.1	91.0	+4
Nickel (000 tons)	11.8	12.3	47.1	+0.2
*Cement (000 bbl.)	1,761	1,494	6,746	+20
Lumber (million fbm)	624	541	1,687	+16
Exports (million fbm)	301	280	752	—0.5

*New item this week

Date for your file: The Financial Post, June 27, 1953.

Industrial Growth

Vanadium-Alloys

New plant of Vanadium-Alloys Steel Canada being erected at London, Ont., will be ready to forge and roll tool and specialty steel by mid-November. Company has purchased a property in Montreal and plans to erect a warehouse for completion by October to serve Quebec and the Maritimes.

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Star Weekly

One building for a new rotogravure plant and paper storage, and another for ink manufacture, will be erected by the Star Weekly on Toronto's waterfront. Project was deferred for 10 years because of costs and wartime material shortages. Rotogravure section of Star Weekly will be printed on new Goss presses at the plant starting March 1 next year.

• • •

CGE

A 13-acre site at Vancouver has been bought by Canadian General Electric from Pacific Mills Ltd. for development for warehouse purposes. Long range plan is eventual transfer of CGE's Vancouver operations to the site. Some of the company's operations will be located there late this summer.

• • •

Dom. Oxygen

Dominion Oxygen will build a plant at Fort William for production and compressing of acetylene and oxygen. It is expected to get into operation late this year. Company now has 14 establishments, will have 16 with plants at Fort William and Edmonton under construction. Fort William plant is a unit of Union Carbide & Carbon Corp., and is associated in Canada with Electro Metallurgical Co. of Canada, producers of ferro alloys and metals; National Carbon Ltd., makers of Prestone antifreeze, Eveready flashlights and batteries and other products; and Bakelite Co. (Canada).

• • •

Thor-Canadian

Thor-Canadian Co. has opened its new plant at Toronto, replacing its former, smaller plant there. Plant, which will turn out washing machines, ironers and other appliances, has 104,000 sq. ft. area.

• • •

Benj. Moore

A new paint factory has been opened in the Montreal suburb of Ville St. Michel by Benjamin Moore & Co. of Toronto. It will begin immediate production of the company's newest line, of Alkyd Sani-Flat paints.

Plant is on a 16-acre site, occupies 23,000 sq. ft. Manager will be James P. O'Neill.

• • •

Steel Buildings

N. V. Ontwikkeling Mij Polynorm, of Holland, has option of land at Montreal for $1.5 million plant for producing steel buildings for industrial and commercial use. Company has also been preparing a steel prefabricated house for the Canadian market (The Financial Post, June 13).

• • •

Fruehauf

A $500,000 trailer depot and branch office is being built at Edmonton by Fruehauf Trailer Co. of Canada for completion late this year. Full-scale sales and service branches at Winnipeg, Regina and Vancouver are to be opened soon. Factory is at Weston, Ont., present branches at Toronto, Montreal and Calgary.

These Shares having been sold, this advertisement appears as a matter of record only.

The offering of these Shares does not represent new financing by the Company, and the proceeds of this issue will not go into the treasury of the Company.

$900,000

Johnston Terminals & Storage Ltd.

(Incorporated under the laws of British Columbia)

6% Cumulative Redeemable Convertible Preferred Shares

Par Value $10

Preferred as to capital and entitled to cumulative preferential dividends as and when declared at the rate of 60 cents per share per annum payable in quarterly instalments on the 15th days of September, December, March and June at any branch of the Company's bankers in Canada (Yukon Territory excepted). Redeemable in whole or in part at the option of the Company on not less than thirty days' notice at $11 per share on or before June 15th, 1958 and at $10.50 per share thereafter, together with accumulated and unpaid dividends to the date of redemption.

Convertible Feature

These Shares are convertible at any time on or before June 15th, 1963 into Common Shares of the Company on a share-for-share basis.

Sinking Fund Feature

Twenty per cent of the annual aggregate net profits of the Company and subsidiaries shall be made available for the purchase or redemption of Preferred Shares provided that consolidated net current assets of the Company's subsidiaries are not reduced below $125,000.

The Company proposes to apply to the Vancouver Stock Exchange for the listing of these Shares.

We, as principals, offer these Preferred Shares, subject to prior sale and change in price, if, as and when issued and accepted by us and subject to the approval of Counsel, Messrs. Campney, Owen, Murphy & Owen.

Price: $9.50 Per Share

including a bonus of 1½ Common Shares of the Company with each 10 Preferred Shares purchased.

It is expected that Definitive Share Certificates will be available for delivery on or about June 29th, 1953.

Wood, Gundy & Company Limited

Pemberton Securities Limited — **Yorkshire Securities Limited**
A. E. Jukes & Co., Limited — **Thomas B. Read Company Ltd.**
Okanagan Investments Limited — **Hall Securities Limited**
Odlum Brown Investments Ltd. — **James, Copithorne & Birch Ltd.**

Samis & Co. Ltd.

Four-Lane Bypass For Trenton Area

Tenders are to be called for soon on another link of the proposed four-lane highway between Windsor, Ont. and the Quebec border.

The new stretch is to be 10 miles long, skirting to the north of Trenton and Belleville, and is expected to cost $1 million without any paving. Another major bypass, approximately half finished, is being built across the north of Toronto. Contracts for grading and culverts on the bypasses around Kingston and in the London-Woodstock area were awarded last fall.

The projects are being carried out in this manner to give immediate relief to the heaviest congested areas; eventually, the stretches will be linked together. Longest stretch of four-lane highway in the system now is from Toronto to Newcastle.

Heavy traffic in the Trenton and Belleville areas is believed to have reduced tourist travel in the area; as the congestion is relieved, the tourist business in the area is expected to pick up.

ICI

IMPERIAL CHEMICAL INDUSTRIES LIMITED

The Greatest Name in British Chemicals

HIGHLIGHTS FROM THE ANNUAL REPORT for 1952

Sales in 1952 were the highest in I.C.I.'s history, at £276,300,000 ($773,640,000) — over £13 million ($37 million) higher than in the previous year.

Exports direct from the United Kingdom were worth £62,000,000 ($173,600,000) or 7 per cent more than in 1951.

Dividends and Reserves — Dividend on the Ordinary Stock was 13 per cent, the same rate as for 1951. £2,000,000 ($5,600,000) was put to General Revenue Reserve. Depreciation and obsolescence provided for the year amounted to over £15,000,000 ($42,000,000).

Raw Materials were easier, though the Company's expansion program was slowed down by a shortage of steel in the early months of the year. The position has now improved.

Capital Expenditure on new physical assets in 1952 amounted to £31,450,000 ($88,060,000).

I.C.I. AND CANADA

Commencing in 1899, through one of its founding companies, I.C.I. has had a continuous interest in manufacture in Canada and today holds a 42 per cent interest in Canadian Industries Limited. This year, a new wholly-owned Canadian subsidiary — IMPERIAL CHEMICAL INDUSTRIES OF CANADA LIMITED — has been formed to initiate construction at Millhaven (near Kingston), Ontario, of a plant to manufacture I.C.I.'s new synthetic polyester fibre, "TERYLENE" (known as "DACRON" in the United States).

After the proposed segregation of the I.C.I. and du Pont interests in Canadian Industries Limited, it is intended to offer this "TERYLENE" project to that successor company of C-I-L in which I.C.I. will be the principal shareholder, and in which Canadians will participate as shareholders.

WORLD-WIDE TRADE

Imperial Chemical Industries Limited has an issued capital of £94,700,000 ($265,160,000) represented by over 200,000 individual shareholdings and has reserves amounting to £173,700,000 ($486,360,000). In Great Britain it operates 100 factories, employs over 100,000 people, and makes a greater variety of chemical and allied material than any other manufacturer.

Behind I.C.I. production is a research and development program costing over £7,000,000 ($19,600,000) a year, which has been responsible for some of the most significant chemical discoveries of modern times.

Abroad, I.C.I. has developed manufacturing interests in sixteen different countries. Its sales organization is world-wide and is supported by a technical service second to none.

The combination of efficient technical service, immense productive capacity, and never-ceasing research has given the I.C.I. symbol a unique reputation in the markets of the world.

I.C.I. IN GREAT BRITAIN — Divisions and Principal Products

ALKALI. Soda ash; caustic soda and derivatives.
BILLINGHAM. Ammonia; nitric and sulphuric acids; nitrogenous fertilizers; synthetic alcohols and gasoline.
DYESTUFFS. Dyestuffs and intermediates; pigments; resins; rubber chemicals; nylon polymer.
NOBEL. Explosives, detonators and fuses; industrial nitrocellulose; 'ARDIL' protein fibre.
GENERAL CHEMICALS. Chlorine, trichlorethylene and other chlorine derivatives; sodium and derivatives; sulphuric acid; insecticides; weedkillers; solvents; refrigerants.
LEATHERCLOTH. Nitrocellulose and polyvinyl chloride coated fabrics.
LIME. Limestone, quicklime and hydrated lime.
METALS. Wrought non-ferrous metals; sporting and military ammunition; ceramics; slide fasteners.
PAINTS. Paints, lacquers and varnishes for decorative and industrial purposes.
PHARMACEUTICALS. Drugs; medicinal and veterinary chemicals.
PLASTICS. Nylon monofilament; 'Perspex' and dental base materials; urea and phenol-formaldehyde moulding powders, polyvinyl chloride; polyethylene.
SALT. Salt in every form.
TERYLENE. Continuous filament and staple fibre.

I.C.I. OVERSEAS — Principal Manufacturing Subsidiaries and Associated Companies

Imperial Chemical Industries of Australia and New Zealand Ltd. (57%)
Imperial Chemical Industries of Canada Ltd. (100%)
Canadian Industries Ltd. (42%)
Alkali & Chemical Corporation of India Ltd. (71%)
African Explosives and Chemical Industries Ltd. (50%)
Magadi Soda Company Ltd. (Kenya) (100%)
Industrias Quimicas Argentinas 'Duperial' S.A. (50%)
Industrias Quimicas Brasileiras 'Duperial' S.A. (50%)
Cia Sud-Americana de Explosivos (Chile) (42%)
Arnold Hoffman and Company Inc. (U.S.A.) (70%)
S.A. Fermeture Eclair (France) (78%)

(Figures in brackets indicate percentage of equity holding)

Copy of complete Annual Report will gladly be mailed on request

IMPERIAL CHEMICAL INDUSTRIES LIMITED, LONDON, ENGLAND

What's New

Manufacturers of products which are either completely new or are being made in Canada for the first time are invited to contribute to this column. Describe the product, state its purpose, outline in what respect it is new, and indicate its significance to its field.

Portable Ways

Attachment for auto trailer enables owner to launch a boat easily. Rear of the trailer is lowered by turning a valve, and boat slips into the water, stern first.

• • •

Bulb Bouncer

Light-weight aluminum section pole enables user to change electric light bulbs 42 feet or more above the floor while standing on the ground. Correct attachments for bulbs of various sizes and shapes are placed on the end, and angle attachments can be added to change bulbs in hard-to-get-at places.

• • •

Climatic Battery

Water capacity of car battery can be adjusted, merely by turning a key, to suit various weather conditions. Decreased water content is desirable for winter driving and increased content for summer.

• • •

Air-Conditioned Tire

Truck tire has "heat vents" which are said to keep the tire 60 degrees cooler than others. Makes for longer life.

• • •

Storage Statistics

Recently completed, easy to-read table gives information useful to large cold storage warehousemen as well as small independent operators. Information includes storage temperature and humidity conditions, storage life, critical temperatures, water content, specific and latent heats and calculated Btu required for solidification of fruits, vegetables, poultry, meat, game, sea foods, etc.

• • •

Auto Freshener

New product, sprayed from an unbreakable three-and-one-half ounce bottle, removes tobacco odors, dampness, etc. from interior of a car.

• • •

Lilliput Liquidator

Insect killing spray, based on malathion, said to be especially effective in destroying aphids and mites, tiny garden pests scarcely visible to the naked eye. Recommended for use on most flowers and ornamentals, evergreens, apples, grapes, pears and most vegetables, it is not considered especially hazardous to people, animals or plants.

• • •

Industrial Tape

Made from vinyl film, new high quality tape for coil and cable insulation, protection against corrosion of underground piping, etc., is said to be exceptionally flexible, has high strength and excellent elongation for winding over irregular surfaces. Available in any standard firm gauge, it has good dielectric strength, power factor and dielectric constant.

• • •

New Catalogues

Davis Automatic Controls Ltd., Toronto. As Canadian representative of the Automatic Switch Company, Orange, New Jersey, this company is distributing Asco publication No. 502 describing automatic transfer switches.

Osborne Electric Co., Ltd., Toronto. Catalogue data available describing a new process for insulating magnet coil windings, transformers and a variety of electrical, electronic and mechanical apparatus by molding these components in a thermo-setting plastic. Material will pass MIL-T-27, Grade I, Class A, specifications, it's claimed.

LORDLY W. JONES

of Hamilton, has been elected president, Stationers' Guild of Canada Inc.

U. S. Crane Firm To Open Toronto Office

P. & H. Harnischfeger Corp., of Milwaukee, will open an office at Toronto about July 1. It has been selling power shovels and cranes, soil stabilizers and other construction equipment in Canada previously. Manager of Toronto office will be Frank Liebich, who is an expert on overhead cranes.

Canadians Out-Chuckle Yanks In Gaiety Aboard Streetcars

Who says the Canadian is a humorless mope, compared to his American cousin?

Here's proof to the contrary:

The Canadian Advertising Research Foundation has figures to show that streetcar and bus posters featuring humor or cartoons score 32% higher (among men) than ads without them.

Even Canadian women enjoy funny ads, says CARF. Humorous ads score 24% higher among the ladies than straightfaced placards.

"In the U. S. studies, however, such features apparently had little or no effect on the scores," CARF adds.

These comparisons are one result of CARF's five-year study of car card advertising in Canada's four largest cities—Montreal, Toronto, Vancouver and Winnipeg.

First On Car Cards

The survey was carried out by special committees of CARF, but wholly financed by Canadian Car & Bus Advertising Ltd. It's the first penetrating picture of Canadian car card reading habits.

CARF itself is a non-profit organization sponsored by the Association of Canadian Advertisers and the Canadian Association of Advertising Agencies. Its job: conducting impartial research among media.

For CARF, the car card survey was a monumental statistical task, and CARFmen are pleased with their results.

The summary of the survey has been published in an attractive 33-page booklet, complete with full color inserts, entitled "The 4-Study Summary of Transportation Advertising."

When it comes to eyeing a streetcar ad the average Canadian has his own ideas—and they often differ widely from those of Mr. and Mrs. Average in the U. S.

Humor, CARF finds, plays a big part in attracting the Canadian eye. Of 45 car cards studied intensively, six of the eight top eye-catchers "had a light or humorous touch."

"None of the eight lowest scoring cards used this treatment," report the researchers, quashing the creaky myth that Canadians are a sombre people.

Canadians also like to see people and faces in their advertising matter. Placards featuring these showed a slight advantage over the others.

Here's what CARF finds about other card features:

—Showing the advertised product apparently neither raises nor lowers the card's score.

—Cards which carry no product message in the headline score very slightly better, with both men and women, than those with a message.

Meisterschaft COLLEGE

"Shortest and Surest Method"

MATRICULATION

No extra curricular activities — Small study groups — Individual instruction

ENROLMENT FOR AUTUMN TERM NOW IN PROGRESS

Telephone Midway 2473

84 WOODLAWN AVENUE WEST TORONTO, CANADA

HURON & ERIE — CANADA TRUST, CALGARY ADVISORY BOARD

ERIC L. HARVIE, Q.C.
Chairman

HOWARD P. WRIGHT
Vice-Chairman

CLAR MANNING

CARL O. NICKLE, M.P.

Announcement has been made by M. Aylsworth, president and general manager of The Huron & Erie Mortgage Corporation and The Canada Trust Company of the formation of the Companies' Advisory Board for Calgary and district.

The Board will be headed by Eric L. Harvie, Q.C., who is a director of The Canada Trust Company. Mr. Harvie is president of Western Leaseholds Ltd. and several other companies and a director of a number of companies including The Southam Company Ltd., The Canadian Bank of Commerce and Empire Trust (New York).

Howard P. Wright is past president of the Alberta Seed Grain Co-operative and The Canadian Seed Grain Association.

Clar Manning is president of Manning-Egleston Lumber Co. Ltd. and Mewata-Millwork Co. Ltd.

Carl O. Nickle, M.P. is editor and publisher, Daily Oil Bulletin, editor, Oil in Canada and director of New Superior Oils of Canada Ltd., Bailey Selburn Oil & Gas Ltd., General Petroleums of Canada Ltd. and Anglo American Oils Ltd.

LOOK WHAT YOU SAVE with Chevrolet!

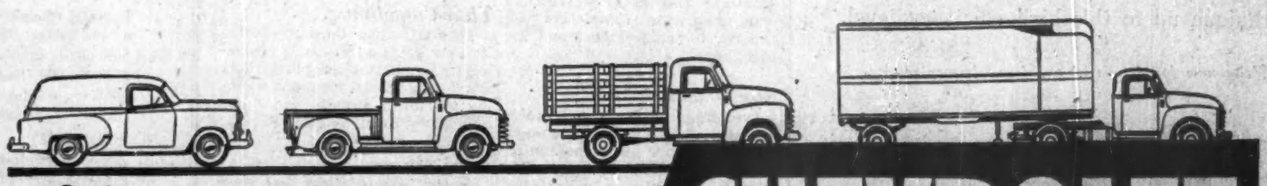
TIME . . . Because they're engineered throughout with your hauling jobs in mind, Chevrolet trucks are easy to load and unload, easy to keep in first-class running order. They'll save you time and trouble, day in and day out, all the year 'round.

MAINTENANCE . . . Truck-engineered from the ground up to provide rugged strength and durability well beyond their normal carrying capacities, Chevrolet trucks will serve you well and faithfully with the minimum of attention and maintenance. On all roads and in all weathers, you can rely on Chevrolet to see the job through!

FUEL . . . Chevrolet Advance-Design trucks offer you a selection of four famous valve-in-head engines with more power and pull than ever before. All four feature improved Power-Jet carburetion for easy starts, faster warm-up and extra economy at *all* operating speeds.

REPAIRS . . . Built for year-in, year-out dependability, Chevrolet trucks will save you repair bills all along the line. One of the reasons why Chevrolet trucks have proved themselves to be the world's leading money makers on any hauling job is because of their record for dependable, trouble-free operation.

MONEY . . . Let your own bank-book show you how Chevrolet trucks save you money. See your Chevrolet truck dealer—check the comparative values for yourself. You'll understand why more people buy Chevrolets than any other make!



More people buy... CHEVROLET TRUCKS *than any other make!*

CHEVROLET

A GENERAL MOTORS VALUE

CT-953

SEE YOUR LOCAL CHEVROLET DEALER

The Financial Post

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Will We Let U.S. Take Over The Arctic?

Many Loopholes In Our Hold Over Vast Area

Recent developments in strategic defense concepts have turned much U. S. attention on the Canadian North. But more than the military is involved in any new approach toward expansion of our Arctic frontier. Here is an examination of the economic expansion which must be taken into account; a second article will discuss the defense program and possibilities, and the role of the U. S. forces.

BY MICHAEL BARKWAY

Canada's claim to all the land up to the North Pole is being tested more seriously than ever before.

Defense developments are forcing the pace. The United States press is beginning to write about the Arctic as though it were a U. S. discovery which had never been touched until the present defense drive took the U. S. services in there.

For Canadians who have given their lives to Arctic development, it is irritating—to put it mildly—to find influential U. S. magazines solemnly declaring: "The United States is not the only country to explore the Arctic," and adding that "surprisingly" the RCM Police boat "St. Roch" made the first northward passage from west to east.

Some of the recent U. S. magazine articles about the Arctic can be excused only on the grounds of ignorance (which is not a very good defense). But they should at least shake Canadian complacency. The very exaggeration of the U. S. excitement about the North—as though it were a thrilling new discovery—shows how far Canada has tended to take the North for granted.

And the very clear moral is that we cannot take it for granted.

To put it bluntly, we cannot sit on it any longer. We'll either have to step up our northern development beyond anything yet contemplated. Or we'll have to let somebody else do it.

Legality of Our Claims

Legally, the Canadian claim to sovereignty in the Arctic Islands rests on no universally accepted interpretation of international law. It has to be defended on two alternative grounds according to two conflicting legal theories.

Strategically, the possibilities of trans-Arctic air attack are increasing, with new types of planes and increasing stocks of atom bombs, and the demand from the United States for early warning and defense installations in the Far North is growing correspondingly.

Economically, the Canadian frontier is moving north faster than most people realize. It has already passed the centre of the Ungava peninsula in the east. It is on the Arctic circle at Port Radium. It is far north of 60 in Keewatin district and the Yukon. In another 10 years, no one can tell where it may reach.

Aeronautically, the first experimental trans-Arctic flights have been made in the last few months by commercial operators. The long-discussed air routes "across the top of the world" may soon be in regular operation.

If the Canadian claim to the Canadian Arctic is to be made good in the next few years, Canada will have to be a good deal more lively than it has been in the last few years. It is presumably a recognition of this which led the Cabinet this spring to reactivate the high level Advisory Committee on Northern Development (The Post, June 6).

If the new urgency about air defense is the thing which has prompted the new prominence of the North, it is only speeding an inevitable event.

Pointing Toward Progress

If you compare what is going on in the Arctic today with what happened last year, you may not see much difference, but compare it with eight years ago and you must be impressed.

At the end of the war there was no sign of the Lynn Lake Mine in Manitoba; no iron-mining in Labrador; no uranium discoveries at Beaverlodge in Northern Saskatchewan; no nickel prospecting at Rankin Inlet or Ferguson Lake. There had been little geological work in Keewatin District; there was Yellowknife, but there was no Pine Point, no talk of a railway to the shores of Great Slave Lake. There was then no talk about developing the Yukon's waterpower for an electro-metallurgical plant. There was no Kitimat or Kemano. There was certainly no thought of an ore-port on Ungava Bay to ship metal out by way of Hudson Strait. There was virtually no oil prospecting in the Northwest Territories.

If all this can happen in eight years, what may be developed in the next eight?

To match this northward drive of Canadian enterprise we have the new transportation routes in prospect. The Great Circle Route over the Arctic is the short way around the world. It is the economical route of the future.

In its bilateral agreement with Canada years ago, British Overseas Airways stipulated for and was granted, a route across the North as the short way from Britain to the Far East.

Scandinavian Airlines is making trials of the route between Copenhagen and San Francisco. It goes direct from Copenhagen to Thule, where the United States Air Force has built a hard-topped air base. Then it bridges the Canadian North, in one hop to Edmonton. If you are aiming for the Far East, the hop would be from Thule to Fairbanks, Alaska. In either case there is a major flight right across the top of Canada—but not a single hard-topped airfield between Thule and the Western terminal.

Nor is there much in the way of navigational aids, in a territory which is notoriously the most difficult for navigation in the world—an area where compasses are useless and radio is doubtful.

Shall We Develop It?

The rest of the world will be wanting to use this territory. Shall we develop it, or shall we let somebody else do it?

The more you see of this northern problem the more it seems that the words "responsibility" and "opportunity" mean the same thing. Canada has a responsibility to the more than 8,000 Eskimos who form the indigenous population north of the treeline (the Arctic proper). Already we are spending public money to try to preserve their health and their livelihood from the inroads which white civilization had made upon them.

The Eskimo are a highly intelligent and friendly people. They have great natural aptitude as mechanics and craftsmen. If they now seem to be in danger of becoming hangers-on at white settlements, it is only lack of training that makes them hangers-on.

In Greenland illiteracy was abolished years ago. There are training schools where the Eskimo learn many skilled crafts.

The Government is planning, and starting, training programs to give the Eskimo these chances. There will be dispute about whether they are too little or too late. But there should be no dispute about the need to press on with them faster and more eagerly. Developments both in defense and in economic progress forbid the leisurely approach which some people might prefer.

In Greenland the development and progress of the native people has a high priority. The Danish agreement with the United States about the bases there includes this clause: "Due respect will be given by the Government of the United States and by U. S. nationals in Greenland to all the laws, regulations and customs pertaining to the local population and the internal administration of Greenland, and every effort will be made to **avoid contact between U. S. personnel and the local population** which the Danish authorities do not consider desirable for the conduct of operations under this agreement."

Joint Weather Stations

Canada has exchanged some private notes with Washington to somewhat the same effect, but no published agreements have any clause remotely corresponding to this.

The responsibilities and opportunities—you can interchange the words—of Northern development must be matched against the sometimes clumsy march of the military into the North. The recent record, unfortunately, reads in parts like a series of grudging submissions to United States initiative.

The famous joint weather stations are one example.

If any one man deserves the credit for them it is Col. C. J. Hubbard of the U. S. Weather Bureau. He was an adventurer in the best sense of the word. He lost his life in 1950 when an RCAF plane crashed in the attempt to drop supplies at Alert, the northernmost of the stations he had helped to establish. A memorial to Col. Hubbard and the eight RCAF men who perished with him is being dedicated at Alert this summer.

Not long before that tragic crash, this writer was one of a small group of Canadians who tried to answer Col. Hubbard's question "Why is Canada so touchy and sensitive about northern operations?" We tried hard, but I know we didn't satisfy him.

The five stations now established are Resolute Bay on Cornwallis Island, Isachsen on Ellif Ringnes, Mould Bay on Prince Patrick Island, Eureka and Alert on Ellesmere Island.

Their meteorological observations go out by radio daily to weathermen all around the world (including Moscow). But their importance goes much further. They are permanent white settlements, in a latitude where there have never been any before in Canada in an area which even the Eskimos have deserted these many years, until now an attempt is being made to re-establish them there. They are bases from which each summer scientific and exploratory expeditions can take off. Although they have no direct military purpose or equipment, they are outposts in a no man's land.

At the main base, Resolute Bay, the RCAF maintains a good gravel air strip. At the others the scanty personnel of the weather stations (generally less than a dozen men) have to clear the landing strips when necessary. In theory the crews are divided half and half between Canadians and Americans. The commanding officer is always a Canadian, with a U. S. executive officer. In practice it is not always easy to find enough Canadians to take these jobs. A Canadian lad out of high school with a few weeks training can clear $4,000 for a year's work as a northern weatherman. The Americans make much more.

Getting the Supplies North

When the stations were opened, between 1947 and 1950, the United States had to do nearly all the transport and supply for them, besides providing the technical equipment.

But the agreement provided that Canada might take over the supply at any time when it could raise the necessary resources. And gradually we have been taking over. No. 426 Squadron of the RCAF now does the main air supply to Resolute, from which distribution is made to Isachsen and Mould Bay. Alert and Eureka are still supplied by the U. S. Air Force from nearby Thule. The Canadians there must often wonder whether they are outposts of the U. S. or of Canada.

Heavy supplies for all the stations have always been taken in by the United States Navy. Every summer a party of two cargo vessels and two or three U. S. Navy icebreakers sails from Boston for the supply mission. The icebreakers take the cargo vessels into Resolute. From there, Isachsen and Mould Bay have to be supplied by air. But the icebreakers also get into Eureka and Alert. Even in the most favorable week of summer, however, it is not considered safe to send one icebreaker alone to the north of Ellesmere unless a second one is in the neighborhood to help out in case of trouble.

Canada must therefore have two suitable icebreakers before it can take over the sea supply. The first of them, the Department of Transport ship D'Iberville, will make an independent trip to Resolute this summer after she gets back from the Coronation Review. But it will be next summer before Canada has its second suitable ship available for this mission.

Now building is the navy icebreaker HMCS Labrador. She should be commissioned early next year. Her captain-designate, Captain O. C. S. Robertson, RCN, is already detached for special duties in the Arctic Section of the Defense Research Board. By next summer there seems no reason why the Labrador and the D'Iberville should not lead the first Canadian sea supply mission to the Arctic Islands, even if the cargo-carriers have to be chartered. And there is every reason why Canada should take over the job as soon as it can.

Other U. S. Establishments

If the five weather stations are joint Canadian-U. S., what other U. S. establishments are there in the Canadian North?

Not as many as some people may imagine; and perhaps not as many as some Americans would like.

There are of course the leased bases in Newfoundland which Canada had to accept (with unconcealed reluctance) when Newfoundland joined the Confederation. Argentia for the Navy, Harmon, Pepperell and McAndrew for the USAF.

Apart from these, which antedated Canadian sovereignty, the U. S. has been given only one other "term-lease" on Canadian soil. This is at Goose Bay, where the U. S. was already operating during the war. The U. S. Air Force has a station on one side of the flying field, and the RCAF operates its station on the other side. The final command rests with the senior RCAF officer, though the U. S. has since the war been given extensive rights in its own leased area for 20 years.

Nowhere else has the U. S. been granted any formalized legal security of tenure. But there are a good many U. S. stations. The northeast coast of Canada is the U. S. Air Force's staging route to Thule. It is in this area, according to published reports in the U. S. press, that the U. S. is building and manning radar stations. Canada makes no attempt to put in Canadian officers or crews at these places. They are little enclaves of the U. S. But of course they fit into the whole radar network, and they come under Canadian command at least once in the complicated interrelationship of the joint U. S.-Canadian air defense system.

Apart from these radar stations, whose locations must be secret, there are a few radio stations and loran posts, some of which Canada is rather belatedly taking over. There are also U. S. forces taking part in training and experiments at the Winter Experimental Station at Churchill.

The eagerness which some Canadians feel about keeping the northern outposts in Canadian hands is not pure chauvinism. If there is an element of false nationalism in it, there are also more solid arguments. One is legal, another practical.

The Law on Arctic Possession

The two conflicting theories of international law about the Arctic Islands are called the "sector theory" and the "occupation theory."

According to the sector theory, sovereignty in the Arctic is determined by extending the coast lines of the mainland of each country along the appropriate meridians right up to the Pole. This puts all the Arctic Islands west of Greenland firmly into Canadian territory—Ellesmere, Axel Heiberg, the Sverdrup Group, Prince Patrick, Melville, Bathurst, Cornwallis, Devon, Banks, Victoria, Prince of Wales, Baffin Island.

The Russians hold the sector theory of international law. The United States has never formally accepted it.

The U. S. maintains the occupation theory. According to this view sovereignty stops at the borders of the mainland, and possession depends on effective occupation.

Canada claims the islands by virtue of both theories. We are heirs first to the original British discoveries and claims. We have moreover since that time maintained effective administration of the whole area. There have always been a few permanent posts spattered through the islands—RCM Police posts, trading posts and mission stations. Thin as these may have been, they were enough to provide for all the needs of the territory, and they were far more—both in extent and permanency—than anybody else ever had. (This is one of the basic facts which some of the U. S. magazine writers have never managed to discover.)

Moreover the permanent settlements have been supplemented down through the years by surveys (land, sea and air), travels by explorers and officials, geodetic missions, geological parties, mapping, and a host of other activities which few Canadians—and even fewer Americans—have ever heard about. The patrols of the RCMP, overland by dog-sled, have alone covered more of the Arctic Islands than any other agency.

On this record the Canadian Government can base its claim to sovereignty on the occupation theory as well as on the sector theory. And it was entirely adequate until defense requirements started to establish permanent settlements where none had been before. The challenge to Canada now is to make sure that the claim to sovereignty through administration and occupation is maintained as firmly as ever in the new circumstances. Legal claims are a poor substitute for the fact of occupation.

We Need More Charts

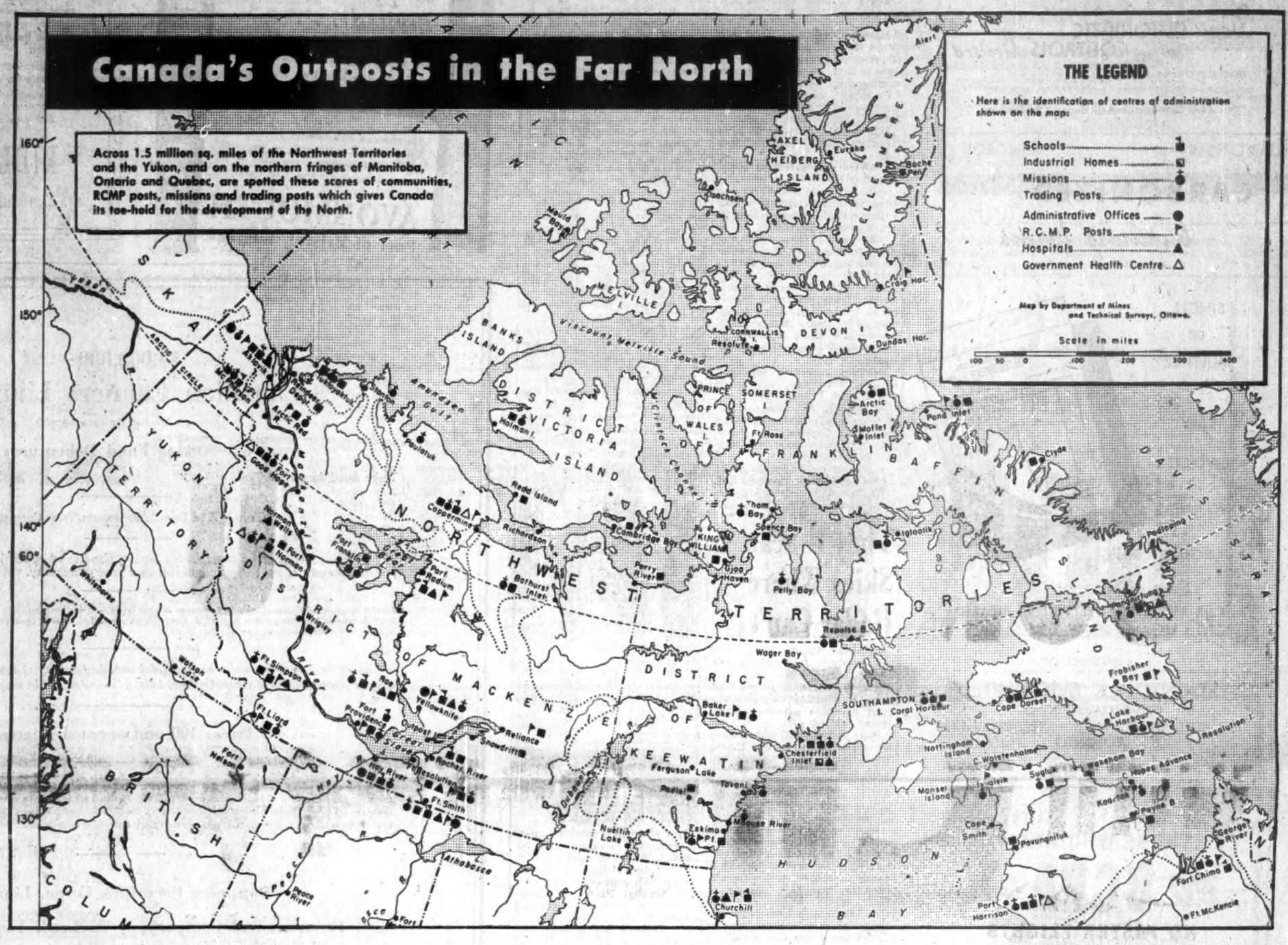
It is reasonably clear now that the new conceptions of air defense strategy will, one way and another, take more and more Americans into the North.

For Canada, defense can never be more than part of the picture—a part, it may be, of overriding urgency, but one which has always got to be reconciled with longer term consideration. Here is a final example, which points up the characteristic problem:

The U. S. Navy, having to date the responsibility for supplying the far northern weather stations, wants more charts. Canada must decide whether to let the U. S. make the charts of waters which it claims, or it must make them itself. The answer in this case is about as clear as it could be. As mining developments spread northward, Canada will have need to chart more and more northern waters. We haven't got the ships to do it. But it is time we had. The U. S. pressure may make us do it sooner than we otherwise would. But that may not be too bad.

A new survey ship, for $3 or $4 millions, is in the long view a small investment in the future of the Canadian North. It will enable Canada to look after the charting of its own waters just as it has, since the war, looked after its own aerial mapping.

In other cases the answer will not be so clear. In the attempt to reconcile national views about northern defense needs, the United States may well want to do things which Canada does not really consider worth doing. It will be surprising if we do not have to allow the Americans to do some things of which Canada does not entirely approve. This is the price for joint defense planning. But if these things are to be kept to a minimum, and if Canada is to keep the lead in northern development then the Government will have to take a longer—and less penny-pinching—view than it has sometimes taken so far.



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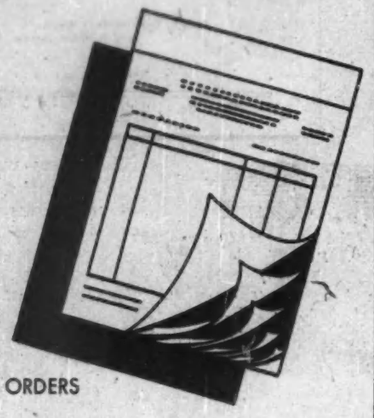

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ONE VIEW OF THE MARKET

Here Are Stocks Traded By Manufacturers Life In '52

Canadian life insurance companies have an investment of $81.7 millions in Canadian stocks. As a service to its readers, The Financial Post presents here one of a series reporting on individual companies' holdings of Canadian preferred and common stocks, as well as changes in these holdings last year.

Manufacturers Life Insurance Co. in 1952 increased its holdings of preferred stocks from 5.8% to 6.6% of invested assets. Common stockholdings were reduced from 5.4% to 4.5% of the total. Stocks were carried at $52,990,344 on the balance sheet at Dec. 31, 1952.

During 1952, in its holdings of Canadian stocks, Manufacturers Life:

—Added one preferred stock, Simpsons Ltd.

—Increased its holdings of three preferreds: Abitibi Power & Paper $1.50, Biltmore Hats A, and Winnipeg Electric $5.

—Eliminated two preferred stocks from the portfolio: Dominion Malting Co. $5 and Zeller's Ltd. $1.25.

—Reduced holdings of five preferreds: Dominion Tar & Chemical $1, International Metal Industries $4.50, Henry Morgan $4.75, Shawinigan Water & Power B, and Stelco 7% cumulative participating.

—Added two new commons: General Petroleums of Canada and Traders Finance Corp.

—Increased its holdings of four common stocks: Canadian Westinghouse, Consolidated Paper, Distillers Corp.-Seagrams, MacMillan & Bloedel B.

—Eliminated 11 common stocks, including Building Products Ltd., CPR, Russell Industries Ltd. and the following mines: Dome, Hollinger, Lake Shore, Macassa, San Antonio, Sylvanite, Teck-Hughes and Wright-Hargreaves.

—Reduced its holdings of 19 commons, including Aluminium Ltd., Consolidated Mining & Smelting, Dominion Bridge, Dominion Tar & Chemical, Fraser Cos., Imperial Oil, International Nickel, Moore Corp., Noranda, Powell River, Steel Co. of Canada, H. Walker-Gooderham & Worts, Westeel Products and the following banks: Dominion, Imperial, Montreal, Nova Scotia, Royal and Toronto.

Here are holdings of Canadian preferred and common stocks at Dec. 31, 1952, together with changes from the previous year:

	Shares Held at Dec. 31 1952	Change Since Dec. 31 1951
Preferred Stocks:		
Abitibi Pwr & Pap. $1.50	19,400	+5,000
Biltmore Hats A $1.00	1,354	+230
Blue Ribbon Corp. $2.50	1,000	.....
B. C. Electric $4.75	1,200	.....
Brock Mills A $1.20	5,300	.....
Can. Bronze Co. $5.00	225	.....
Can. Car & Fdry. A $1.00	4,000	.....
Can. Celanese $1.75	800	.....
Can. Food Products $4.50	500	.....
Can. Ind. Machine A $0.80	2,000	.....
Dom. Malting $5.00	....	—1,000
Dom. Tar & Chem. $1.00	695	—3,305
Fittings Ltd. A $0.60	6,925	.....
Gen. Steel Wares $5.00	2,043	.....
Hamilton Cotton $5.00	350	.....
Imp. Varnish & C. $1.50	1,323	.....
Internat. Metal Ind. $4.50	805	—420
Gord. MacKay & S. A $0.30	5,000	.....
Monarch Knit. $4.50	250	.....
Henry Morgan & Co. $4.75	1,923	—375
Nat. Grocers Co. $1.50	600	.....
P. L. Robertson Mfg. $2.60	1,250	.....
St. Law. Flour Mills $7.00	271	.....
Shaw. Water & Pr. B $2.25	945	—1,810
Simpsons Ltd. $4.50	4,100	+4,100
Steel Co. of Can. $1.10	4,830	—10,970
Winnipeg Electric $5.00	4,407	+415
Zeller's Ltd. $1.25	....	—4,000
Common Stocks:		
Abitib Power & Paper	14,000	.....
Aluminium Ltd.	2,000	•—3,000
Can. Bank of Commerce	2,000	.....
Dominion Bank	2,000	—470
Imperial Bank of Canada	2,500	—925
Bank of Montreal	3,500	—500
Bank of Nova Scotia	2,000	—2,473
Royal Bank of Canada	3,500	—950
Bank of Toronto	2,400	—473
British American Oil	4,110	.....
Building Products, Ltd.	....	—2,800
Can. Breweries Ltd.	5,500	.....
Can. Celanese Ltd.	2,000	.....
Can. Cottons, Ltd.	1,000	.....
C.P.R.	•	—1,500
Can. Western Lumber	25,000	.....
Can. Westinghouse Co.	2,305	+1,210
Cons. Mng & Smelting	17,500	‡—7,500
Consol. Paper Corp.	9,675	+1,605
Consumers' Gas of Tor.	22,580	•
Distillers Corp.-Seagrams	13,900	+3,000
Dome Mines, Ltd.	....	—900
Dom. Bridge Co.	2,000	—900
Dom. Glass Co.	3,600	.....
Dom. Tar & Chemical	7,090	—375
Ford Motor Co. of Can.	5,000	.....
Fraser Cos., Ltd.	3,975	‡—2,025
Gen. Pete. of Can., Ltd.	6,300	+6,300
Gen. Steel Wares Ltd.	2,800	.....
Great Lakes Paper Co.	18,000	.....
Hamilton Cotton Co.	2,329	.....
Hollinger Cons. G.M.L.	....	—500
Imperial Oil Ltd.	4,500	—500
Internat. Nickel of Can.	11,000	—2,925
Lake Shore Mines, Ltd.	....	—800
Macassa Mines, Ltd.	....	—2,700
MacMillan & Bloedel B	29,800	+11,675
Mining Corp of Can.	3,000	.....
Moore Corp.	5,000	—5,024
Noranda Mines, Ltd.	5,000	—2,000
Powell River Co.	2,000	—3,805
Price Brothers & Co.	17,850	.....
Russell Industries, Ltd.	....	—450
San Antonio G.M.L.	....	—2,400
Stedman Brothers Ltd.	3,800	.....
Steel Co. of Canada Ltd.	2,660	—8,840
Sylvanite Gold Mines	....	—4,400
Teck-Hughes G.M.L.	....	—2,100
Traders Finance Corp.	6,000	+6,000
Hiram Walker-G. & W.	5,300	—1,500
Westeel Products Ltd.	12,000	—2,000
Wright-Hargreaves Mines	....	—1,200

*Adjusted for 2-for-1 stock split.
‡Adjusted for 3-for-1 stock split.
‡Adjusted for 5-for-1 stock split.
•Adjusted for 10-for-1 stock split.

The company's invested assets at year-end consisted of 62.1% bonds, 18.9% mortgages, 4.7% policy loans, 11.1% stock investments, 1.6% real estate and 1.6% miscellaneous. Here is an analysis of invested assets at the end of each of the last four years:

Analysis of Invested Assets

	1952 %	1951 %	1950 %	1949 %
Bonds:				
Government	18.6	20.8	26.3	31.1
Municipal	12.5	12.5	12.3	11.8
Other	31.0	27.8	26.0	23.4
Total	62.1	60.9	64.6	66.3
Mortgages:				
Farm	0.2	0.2	0.2	0.3
Urban	18.7	19.3	17.8	15.4
Total	18.9	19.5	18.0	15.7
Policy Loans	4.7	4.6	4.5	4.4
Stocks:				
(a) Preferred	6.6	5.8	5.2	5.3
(b) Common	4.5	5.4	3.1	2.9
Total	11.1	11.2	10.3	9.2
Real Estate	1.6	1.2	0.5	0.4
Other	1.6	2.6	2.1	2.0
Grand Total	100.0	100.0	100.0	100.0

They'll Scan Skies Where Radar Can't

LONDON (Staff)—Opening of the country's first Ground Observer Corps filter unit here marks the beginning of the final stage in building Canada's aircraft detection network against enemy raiders.

Fully co-ordinated with a similar organization in the United States, the Corps in Canada will soon consist of 80,000 trained civilians who in an emergency will be able to assist in the detection of enemy aircraft for interception.

Based on World War II British experience, the Corps provides a network of civilian observers located at strategic points. They phone in reports of hostile aircraft to their local plotting or filter centre which, combined with information from radar stations, gives interceptor fighter controllers a complete picture of the size, height, speed and direction of flight of an enemy air attacking force.

Financial Difficulty

The RCAF sees the setting up of such filter units across Canada as the only solution to the problem of how to give adequate warning of air attack when viewing the financial impossibility of covering the vastness of Canada with radar stations.

Not only the high cost of radar stations ($2 millions to $12 millions), but the failure of radar to detect low-flying aircraft, has dictated the necessity of building an Observer Corps equipped with 11 filter stations costing $25,000 each.

The Corps is designed to operate below the 55th parallel to supplement, rather than replace, existing radar and observer networks.

At present the giant screens of radar stations spin silently 24 hours a day above Arctic tundra and at the coasts to give early warning of attack. Also today, full-time observers north of 55 report all movements of multi-engined aircraft.

11 Centres Approved

The decision to organize the Corps was made in 1951 and to divide Canada into provincial areas (below 55) and establish filter centres according to existing lines of communications. Following a Bell Telephone Co. survey it was recommended that 24 filter centres be established. However, so far only 11 have received Cabinet approval.

By the end of the year it's hoped to have these on an operating basis manned by 80,000 volunteers to co-ordinate with the U. S. network of 49 filter centres and 22,000 observation posts.

Schedule Halifax Education Meeting

The Canadian Educational Association's annual convention will be held at Halifax, Nova Scotia, Sept. 15-17 with addresses to be given by: Dr. C. C. Goldring, Toronto; Canon A. S. Walker, Halifax; Dr. B. O. Filteau, Quebec City; E. K. Ford, Halifax.

The meeting will consist of conferences and discussions on such topics as: teacher participation in curriculum planning; urban education; recruitment of teachers for isolated schools; guidance; adult education and the CEA-Kellog project in educational leadership.

CPR Orders 65 Fuel Tank Cars

MONTREAL (Staff)— Canadian Pacific Railway has ordered a fleet of 65 tank cars to carry fuel for its diesel locomotive fleet. To be built by American Car & Foundry Co., they are scheduled for delivery during the third quarter of this year, coinciding with dieselization of the company's Kootenay and Kettle Valley divisions in southern British Columbia.

Fuel for CPR's western diesel service is obtained mainly from prairie refineries and the tank cars will be used to keep it coming in a steady flow for the main line Calgary - Revelstoke and Kootenay - Kettle Valley runs. Storage tanks are maintained at various depots by the company.

Of all-welded steel construction, the new tank cars have a capacity of 16,000 gallons, among the largest ever built. They are slightly larger than the usual tank cars seen on the railway.

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Tackle Broad Business Front at London Conference

How vulnerable is the Canadian economy today? What's the outlook in merchandise trade, the flow of capital investment, employee-labor relations? How well served statistically is the businessman, the economist?

These and other questions were discussed at the recent annual meeting of the Canadian Political Science Association at the University of Western Ontario, London.

Here are highlights from some of the addresses:

EDWARD A. WALTON Bank of Montreal:

Paley report findings indicate that the U. S. is likely to become more dependent on Canada, strengthening our bargaining position. But we are still very susceptible to what goes on over there. There are close ties between labor on both sides, personal ties, communications, etc., and these sharpen Canadian sensitivity to changes in economic climate in the U. S.

Making Canada less vulnerable than a generation ago are: the larger population, domestic capital formation which enlarges the country's ability to produce, our wartime fiscal policy experience so the government knows how to act in times of economic emergency, and social security transfer payments.

We are more vulnerable because our external trade eggs are more heavily concentrated in Uncle Sam's basket, because we are more sensitive to Uncle Sam's mood and because Uncle Sam is inclined to be fickle. More vulnerable also, perhaps, because the ebbs and floods in the tides of trade with hard and soft currency countries may not always conspire to buoy up the total trade of Canada.

But on the other hand, less vulnerable because external trade plays a slightly smaller role in our economy and because we happen to have, and are specializing in selling, the things that are growing scarce elsewhere. Less vulnerable, too, because we are better prepared and better equipped to withstand an onslaught.

• • •

C. D. BLYTH, Chief of the Balance of Payments Section of DBS:

Mobility of capital is an attribute of an adaptable society. One of the signs of Europe's hardening of the arteries has been the immobility of capital as capital autarchy grows in that continent. There are numerous evidences of vitality in the Canadian scene. Perhaps one of these is the growth in Canadian direct investments abroad whose rate of increase matches, and in some directions even exceeds, the rate of growth in U. S. direct investments in Canada. For this is largely a broadening out of activity by some businesses into wider markets. Recently too, there has been a large and sudden growth in Canadian short-term assets abroad. On the other hand, Canadian portfolio holdings of foreign securities have been declining. Perhaps this, too, is partly a sign of more highly developed capital markets in our own country.

• • •

H. J. CLAWSON, Director of Industrial Relations, Crane Ltd., Montreal:

In our zeal to achieve a larger measure of labor peace—to reduce conflict—we must not be diverted to the erroneous conclusion that conflict can and should be eliminated completely. We may not even succeed in our more modest objective of reducing conflict if we proceed on the premise that complete labor-management harmony and co-operation is both possible and desirable.

While there is a large area where employers and unions can make group decisions, there are also basically divergent interests—wages, for example. If there were never any disputes or strikes over wages, then the relationship between the parties would clearly not be one of collective bargaining.

Those who seek to increase the area of agreement in the collective bargaining relationship would do well to recognize this hard truth, lest they dissipate their energies in an abortive pursuit for a mere illusion.

Even if complete co-operation were possible in a collective bargaining relationship it should be avoided. In a situation involving industry-wide bargaining, there is a real danger that the relationship between the parties could reach that degree of co-operation, that the public interest would suffer—strikes might be preferable.

There have been several examples, notably in the building trades in some American cities, where collective bargaining actually consists of a conspiracy between employer and union against the consumer, not only on wage rates and prices, but also in the technological field. Our legislation should be designed to prevent this, by maintaining a proper balance of power between industry and organized labor in our collective bargaining procedures. I believe we have done not too badly on this score in Canada. We must continue our quest for less disagreements which result in economic coercion, but we must also be realistic and not attempt the impracticable and the undesirable.

• • •

JEAN MARCHAND, General Secretary, Canadian and Catholic Confederation of Labor:

Our economic system of free enterprise has proved itself highly efficient on the score of production of material goods, but its efficiency has been developed to the detriment of higher attainments.

Private enterprise, in itself, is not sacred . . . it is valuable only in so far as it accomplishes its economic mission, by respecting our democratic institutions and by not stifling the legitimate aspirations of the human person. It surely cannot survive if it limits its preoccupations to production and profit.

• • •

GILBERT JACKSON, Toronto economist:

Money wage rates in Canada have been increasing at about 8% annually, while output per manhour has been rising by 2% or 2½% annually. The persistent raising of money payments per manhour of work done, in the same proportions as during these last six completed years, from 1946 to 1952, cannot but start another inflation, another series of inexorable increases in the living costs of all Canadians.

To keep the wages rising at this rate the cost of living must jump about 6% annually. It may be thought that a 6% increase in the retail cost of living is a quite small price to pay for avoidance of large-scale disputes about wage rates . . . But a regular diet of this kind, for five years, would increase the cost of living by no less than 33.8%: in 12 years, it would again double our cost of living.

If this happens, we shall need to blame nobody for this event, other than ourselves.

• • •

PROF. STUART JAMIESON, University of British Columbia:

Setbacks in a number of export industries during the past year have been more than made up for by expansion in other industries. Inflation and rising prices during recent years have not been caused primarily by trade union pressure on wages and production costs, but through credit expansion arising from wartime deficit financing, followed by the investment boom. High prices, good demand for labor have enabled unions to win wage increases and benefits that have more than compensated for higher costs of living.

The flow of capital into Canada shows that the danger point in wages has not been reached in most industries. Productivity of capital here is still sufficiently high in relation to costs as compared to the U. S.

While general wage levels have risen, disparities have crept in, and workers are concerned with relative levels of comparative occupations more than just absolute wage increases. The main disparities in Canada are between Canada and U. S. rates, between major industries in Canada, among major occupational and income groups, between regions and localities but in the same industry.

The rapid growth and competitive drive of trade unionism in the midst of inflation and industrial expansion has brought markedly unequal distribution of gains and losses in economic and social status, wide differences in wage increases. But there is an element of consistency in the collective bargaining pattern.

The sequence seems to be:

1. Key bargains, and frequently major strikes are carried out by large, influential and strategically located unions, such as iron and steel, autos, electrical products, pulp and paper, meat packing, sometimes construction. These tend to base their demands on U.S. standards.

2. Gains won by unions in these industries create disparities and thus put pressure on unions in other industries to win comparable gains.

3. Trade union pressure and bargaining power and employer ability to pay vary from region to region and industry. With general rise in wages, disparities develop.

4. Long established differentials in wages between skilled, semiskilled and unskilled narrow.

• • •

HENRY KING, Cockfield, Brown & Co., Montreal:

Good statistics increase efficiency and in marketing, reduce the over-all costs of distribution. So useful are the DBS reports that when an attempt was made to find their uses we found it easier and shorter to list the reports we had not used rather than those we had.

Commercial researchers could use some additional statistical work from DBS:

1. Extending the use of "spending units" in addition to the crude population figures.

2. More breakdowns between French- and English-speaking data—particularly for Quebec.

• • •

V. R. BERLINGUETTE, Chief of the Business Statistics Section of DBS:

Statisticians are trying to develop measures of output based on physical volume rather than dollar volume which has to be deflated for price changes. Eventually, when output figures in constant dollars are available, productivity and the real growth of the economy can be more accurately measured, for it won't be distorted by violent price changes.

Willy Wilco says—

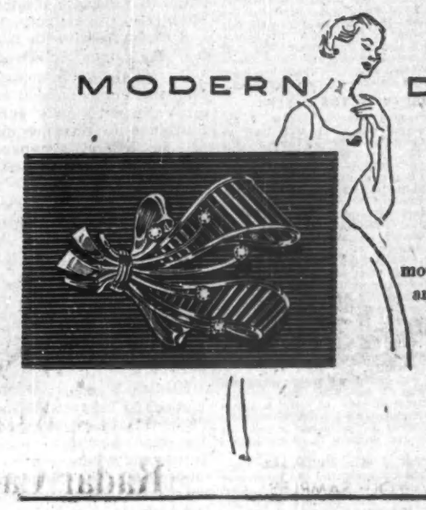
The confidence that Canadians place in the name Wilson & Cousins is the result of 72 years of making and selling an endless variety of fire protection equipment — it has helped make "Wilco" the most respected name on the Canadian market.

We invite your inquiries — our company agents will survey your premises without obligation.

SINCE 1881

TORONTO VANCOUVER

Largest All-Canadian Fire Equipment House



MODERN DESIGN

A new and exclusive creation from Birks Jewel Studios; Spray Brooch, set with five round diamonds, mounted in 14kt. yellow and 18kt. white gold. 325.00

BIRKS
JEWELLERS

New Issue

$35,000,000

The Hydro-Electric Power Commission of Ontario

Guaranteed as to principal and interest by the

Province of Ontario

4¼% Bonds

To be dated July 15, 1953 — To mature July 15, 1969

Principal and half-yearly interest (January 15 and July 15) payable in lawful money of Canada at the holder's option at any branch of the Commission's banker in Ontario or in any of the Cities of St. John's, Newfoundland, Halifax, N.S., Charlottetown, P.E.I., Saint John, N.B., Quebec and Montreal, Que., Winnipeg, Man., Regina, Sask., Calgary and Edmonton, Alta., and Vancouver and Victoria, B.C. Callable in whole or in part on or after July 15, 1966, on any interest date at 100 and accrued interest, on thirty days' prior notice.

Coupon bonds, registrable as to principal, may be issued in the denominations of $500, $1,000 and $25,000 and fully registered bonds in the denominations of $1,000, $10,000 and $100,000. Coupon bonds and fully registered bonds, and the several denominations thereof, to be interchangeable.

Legal opinion of Messrs. Daly, Thistle, Judson & McTaggart.

The above bonds are direct obligations of The Hydro-Electric Power Commission of Ontario and will be unconditionally guaranteed as to principal and interest by the Province of Ontario, the guarantee being endorsed on each bond. The proceeds of the bonds are to be applied to meet, in part, the cost of the acquisition of property, the construction of works, and the reconstruction of equipment of the Commission and of others, duly authorized to be acquired, constructed and reconstructed by the Commission and to repay in whole or in part any temporary borrowing of the Commission for such purposes.

Price: 99.25 and accrued interest to yield about 4.32%

As principals, we offer these bonds when, as and if issued and accepted by us, subject to prior sale and change in price and subject to approval of Counsel.

• It is expected that interim bonds will be ready for delivery on or about July 15, 1953.

A circular describing this issue will be sent upon request.

McLeod, Young, Weir & Company Limited
Bell, Gouinlock & Company, Limited
Mills, Spence & Co., Limited
Royal Securities Corporation Limited
Dawson, Hannaford Limited
Harrison & Company Limited
Matthews & Company
R. A. Daly Co. Limited
W. C. Pitfield & Company, Limited
Harris & Partners Limited
Equitable Securities of Canada Limited
Bankers Bond Corporation Limited
Brawley, Cathers & Company
Charles H. Burgess & Company

Wood, Gundy & Company Limited
A. E. Ames & Co. Limited
Dominion Securities Corpn. Limited
Midland Securities Corpn. Limited
Cochran, Murray & Co. Limited
Fry & Company
Collier, Norris & Quinlan Limited
Gairdner & Company Limited
Burns Bros. & Denton Limited
James Richardson & Sons
Anderson & Company Limited
Bartlett, Cayley & Company Limited
J. L. Graham & Company, Limited
Flemming & Company

Walwyn, Fisher & Co., Limited

The information contained in this advertisement is based upon statements on which we have relied. We do not guarantee but believe the statements herein to be true.

MARKS AND SPENCER LIMITED

CONTINUED INCREASE IN TURNOVER

IMPROVEMENTS IN MERCHANDISE

MODERNIZATION OF STORES

The twenty-seventh Annual General Meeting of Marks and Spencer Ltd. was held on the 11th June at 82, Baker Street, London, W.1.

Sir Simon Marks D.Sc. (Chairman and Joint Managing Director) who presided said:

Ladies and Gentlemen:

May I take it that in accordance with customary practice the Directors' Report and the Accounts as circulated be taken as read?

PROFIT AND LOSS ACCOUNT

I am glad to report that our profits for the year, after taxation, have amounted to £2,466,000 compared with £2,306,000 for the preceding year.

The sum of £4,275,000 has been provided for taxation compared with £2,790,000 a year ago.

With the amount of £4,306,000 brought forward from last year there is available for distribution £6,972,000.

Your Board propose a final dividend of 35%, making 60% less tax, for the year on the Ordinary and 'A' Ordinary Capital, requiring in total the sum of £1,327,000.

After the transfer to the General Reserve of £1,500,000, and approval of the dividends and other appropriations recommended, the carry-forward to next year will be £4,061,000.

RESERVES

Following the capitalisation of reserves which was made in June of last year, the reserve funds of the Company amounted to £8,793,000. With the addition of £1,143,000 from the profits of the year they now amount to £9,936,000.

PROPERTIES AND EQUIPMENT

During the year we continued modernising our Stores and rebuilding those destroyed during the war.

Properties stand in the Balance Sheet at £8,940,000 after capital expenditure of over £900,000 and have been depreciated at the usual rates. This figure is obviously substantially below their present-day value as most of our properties were acquired before 1939. They represent, therefore, a considerable capital reserve. Our rental charges are based on the original cost, and thus our profits benefit accordingly.

Fixtures and Equipment stand in the Balance Sheet at £2,653,000 after providing £562,000 for Depreciation — an increase of over £300,000 on last year. This is part of the investment in our programme of modernisation.

SUBSIDIARY COMPANIES

Advances made to our Subsidiary Companies have fallen from £4,340,000 to £1,900,000.

The stocks of the Subsidiary Companies form the pipe-line for a large part of the cloth used in our business. They now amount to £1,148,000 compared with £2,915,000 a year ago.

CASH AND SECURITIES

Cash balances and investments in Government Securities and in Tax Reserve Certificates amount to £7,000,000 — an increase of £5,500,000.

GENERAL SURVEY

I am pleased to record the continuing progress of the affairs of our Company. Our turnover for the past year was £85,000,000 — an increase of 10% over the previous year.

It was the first full year of the operation of the "D" Scheme, which gave us freedom to transform our merchandise values by the creation and utilisation of better and finer quality materials. After a period of thirteen years of control by Government regulation we were in a position, at long last, to exercise our initiative and accumulated experience in presenting our customers with a wide range of well-styled, well-finished, attractive garments at prices they could afford to pay. The expansion of our business reflects the increasing goodwill of our public — an asset which we cherish and greatly value.

It is our aim to satisfy the growing needs, of our customers with moderate and lower levels of income for inexpensive goods of quality.

Our customers are quality and style conscious. They understand values, for they are most discerning in their purchases.

MERCHANDISE DEVELOPMENT

There have been some quite remarkable improvements in our goods, which stem directly from the fact that we are now increasingly able to use better, finer, and newly developed materials.

Our Merchandise Development section concentrate on the development and production of a wide range of suitable woven and knitted materials for our garment manufacturers. Before the war, we had found it essential to centralise the purchase of our basic cloths in order to standardise quality and to organise the production of the great volume of grey cloth needed. Satisfactory standards were achieved, but that important activity was halted by the war, when a general decline in quality set in throughout the industry. As soon as conditions permitted we took up this work again and have already effected considerable improvements in the construction and quality of our basic materials. We have added many new and interesting cloths.

The Printing Department, which is responsible for the conversion of the grey cloth into the finished fabrics by printing and dyeing, has made much progress. They study and apply new technical processes for colour-fastness, shrink resisting treatments, and anti-crease finishes, features which add much to the appearance and durability of our fabrics.

The Styling and Design centre has been built up to deal with the styling of the garments which serve as production models for our manufacturers. They take into account the trends of fashion which are adapted to meet the tastes of our customers. The grading of sizes is an important part of their functions. This has meant a considerable study, over a long period, to determine the range of sizes required to satisfy our public with ready-to-wear apparel.

Qualified scientists, technicians, and stylists deal specifically and systematically with the various tasks I have indicated. They work in conjunction with our executives, selectors, and merchandisers who are responsible for the organisation and progressing of the production of the vast quantities of goods needed for our Stores. The success of these activities depends on the team spirit which, I am happy to say, animates the whole of our organisation.

This preparatory work simplifies and facilitates the task of our manufacturers as it enables them to concentrate their efforts on the orderly production of our goods. These special services are much appreciated by our friends as they supplement their own skills, techniques, and experience.

In our Food Section we have continued to develop specialised lines of quality and value. A growing proportion of our foodstuffs is sold in attractive hygienic packs which conserve freshness and facilitate handling and speed of service. Important ingredients such as fats and sugar are now more freely available. Our suppliers will be able progressively to utilise these basic raw materials at reasonable prices instead of expensive — and not always satisfactory — substitutes which have had to be used hitherto. In co-operation with our friends, we are now engaged in improving our values and in bringing down the selling prices of many items for which there is a wide demand.

TRIBUTE TO MANUFACTURERS

It is interesting to observe that 80% of our goods are sold at less than 30/-per article, and 43% are still sold under 5/-, which price before the war constituted our appeal to the public.

So varied a range of inexpensive goods of quality could not have been evolved without the understanding collaboration of our suppliers, with whom we enjoy a partnership of minds and ideals. Just as we have invested large sums in modernising our Stores, so have our friends invested considerable monies in new factory buildings, new machinery and new equipment. They have devoted much effort to the training of specialised labour forces, for we attach the greatest importance to the workmanship and finish for which the brand name of "St. Michael" is a guarantee.

Our friends have a deep understanding of the consumer problem and know that it is the public who are the final judges of value. By introducing new techniques and planned and careful production, they enable us to present a wide range of desirable merchandise. Our market is an assured and growing outlet for their goods, and continuity of production for them is as essential as continuity of supplies to us. This harmony of interests is responsible for the success of our joint efforts. We thank them for their most helpful collaboration which we value most highly.

MODERNISATION OF STORES

We had always taken pride in the appearance of our Stores and had tried to make them attractive to our customers. We had maintained our properties in first class condition, but the war years forced us to neglect this aspect of our business.

It has been a major task to make up the leeway. As licenses to repair and build became available and building materials freer in supply we set out to restore our properties and modernise our Stores.

Modernisation means a radical conversion which has given many of our Stores a new look and a new character more in keeping, with the specialised goods we are selling. We have spent much on equipment and on specially designed display fixtures and counters. We have introduced modern decorative and lighting schemes, for we seek to create a worthy setting for our goods and to give to our customers the convenience of shopping in attractive surroundings. Our customers have so readily responded to these new amenities that we are encouraged to extend this transformation to the rest of our Stores.

It is with pleasure that we can report the re-building, since the war, of our bombed Stores at Bristol, Clacton, Exeter, Plymouth, Southampton, Sheffield and Yarmouth. New Stores have been opened at Leeds, Norwich, Sheffield and Swansea. All our latest conceptions and ideas have been incorporated in these buildings, which are an impressive addition to our chain. Important extensions have been made at 20 Stores.

Since the end of the war we have invested some £11,000,000 on the whole of this programme, and further substantial sums will have to be appropriated.

In addition, the sum of £1,250,000 has been invested in new sites for future development and in the enfranchisement of some leasehold properties. The whole of the expansion I have outlined has been met from the Company's own resources.

TRIBUTE TO THE STAFF

Our staff now exceeds 36,000. I am sure that you will join with me in thanking them for their services during the year. The Board is most appreciative of their loyalty and devotion. Our thanks are due to one and all, whether engaged on the administrative side of our business, or brought by their duties into direct contact with our customers.

I have paid tribute to the team spirit which animates all at Head Office. It animates equally all employed in our Stores. The Sales Staff take pride in the attractive goods they sell, for they know the detailed care which has gone into their manufacture. By their knowledge of the goods, and their courteous and helpful approach to our customers, they add to our good name and the goodwill we enjoy with the public, as so many spontaneous appreciations from all over the country testify.

We are concerned with the education and training of our staff, for the expanding requirements of our business offer many and varied careers, and organised Courses are arranged to advance their skills and prepare them for higher positions.

The ambition of so many to make their career in the business, and the increasing length of service of our staff, is a noteworthy feature. The number who have attained a service of twenty five years grows from year to year. This is the occasion for an appropriate ceremony at Head Office marking this important event in their lives.

Our Welfare Department is devoted to the well-being of our staff, and the amenities which it creates are designed to make their working hours pleasant and congenial. After business hours there are social and other activities for those who care to participate in them. All this adds to their sense of belonging to our organisation and creates an esprit-de-corps so important to the success of the Company.

Our staff is aware that provision is made, through our Pension and Benevolent Funds, for an appropriate pension to be paid to those who, on retirement, have qualified by their record and length of service. The position of our pensioners is reviewed annually, and any special needs which they may have are taken care of by the Company. We regard them still as members of the firm, and in their retirement they enjoy many of the amenities which were available to them during their active careers.

It is because of these growing needs that we propose to increase to £100,000 our allocation this year to the Benevolent Trust.

The report and accounts were unanimously adopted.

The Wawanesa

Mutual Insurance Company

Admitted Assets $14,904,734.77

Surplus 4,557,440.61

Dom. Govt. Deposit 3,969,667.99

Write for Financial Statement

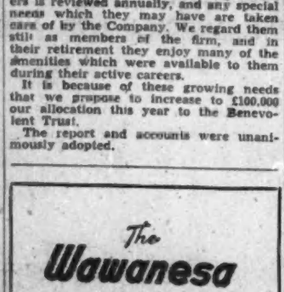
Head Office: WAWANESA, Man. Eastern Office: TORONTO, Ont.

Branches at Vancouver, Saskatoon, Winnipeg and Montreal

NOW you can afford COOL COMFORT

Gibson

ROOM AIR CONDITIONER



Get relief from heat. Gibson cools, dehumidifies, circulates, filters, breathes fresh air in — stale out — all at once.

See your local dealer or write or phone:

THE CANADIAN FAIRBANKS-MORSE COMPANY LIMITED

Fifteen Branches Across Canada

Annual Report Failings, What To Do About Them

Most annual reports tend to be uninteresting, too technical, and lacking in many instances in information vital to shareholders.

That's the gist of a report just issued by a special committee of the Young Men's Section of the Montreal Board of Trade. The report is based on a survey of 55 leading Canadian companies whose securities are held by the investing public.

The survey dealt with two aspects of the annual reports—their general layout and narrative, and the presentation of financial information.

A check list of points which a model report might contain was prepared as a basis for judging the reports. Greater weight was given to some features than to others. The check list was based on the belief that the annual report is not only the shareholders' most important source of information, but also is of interest to company employees, customers and suppliers.

How They Rated

On general layout and narrative, ten reports scored 75% or better, sixteen rated in the sixties, and one scored a lowly 5%. "The most obvious aspects in which many of the reports which were studied appear to be lacking were under the headings of appearance, intelligent explanation of events and comparisons with the industry," the committee stated.

On financial information, 13 companies of provincial incorporation did not supply enough information to meet requirements of the federal Companies Act with respect to financial statements.

Only 12 reports showed separately the items which the committee felt should be shown in order to make an intelligent analysis of the profit and loss statement.

The committee concluded that the great majority of Canadian annual reports leave much to be desired.

Said their report: "Little effort is made to interest the shareholder in what has transpired during the year, how his company has fared, and where and how it has improved. The financial statements are generally prepared by accountants in technical language and form and are in some measure unintelligible to the uninitiated shareholder. It is important that the thinking employed in the preparation of financial reports should be directed toward obtaining the understanding of the shareholder and other interested persons who have neither the time nor the aptitude to understand a technical report.

Competition Excuse

"The committee recognizes that there is sometimes a reluctance on the part of a company to giving full information in their reports on the ground that such information would be useful to competitors or that shareholders are not particularly interested, so long as a dividend cheque is received.

"Set against these arguments, however, it may be claimed that disclosure of so-called company secrets, such as production and sales figures, has not hindered the growth of American companies, most of which, in conforming with Securities and Exchange Commission and New York Stock Exchange regulations, provide fairly frequent and lucid information to their stockholders and public."

The annual report can be an important instrument in a company's public relations program, the committee pointed out, and in some cases it also may be a valuable aid in promoting products, if it is prepared with an eye on the check lists employed in the testing of these reports by the survey committee.

Here are the check lists:

Text Presentation

(No. of points shown in parentheses)

1. Is appearance attractive enough to
   (a) command attention and interest? (2)
   (b) induce reading? (2)
2. Is it in a popular, easy-to-file format (7" x 9" or 8½" x 11")?
3. Is general presentation effective and pleasing?
   (a) Is typesetting clear and legible? (2)
   (b) Is text short lines and short sentences? (2)
   (c) Is paper stock of good quality and suitable to the presentation? (2)
   (d) Are main headings set out to attract attention? (4)
4. Does order of appearance of various items follow an intelligent pattern?
   (a) President's letter—concise (not running through the report) (2)
   (b) Page of highlights either before or immediately after the president's report (2)
   (c) Year's operations—volume in dollars and quantities (3)
   (d) Cost of operations, manufacturing cost (materials, wages, taxes, etc.), net profit, dividends, surplus. (3)
   (e) Profit and loss starting with sales—two-year comparison. (3)
   (f) Balance sheet—two-year comparison. (3)
   (g) Five or more years financial recapitulation. (3)
5. President's letter—does it contain:
   (a) General review of year for company and industry. (3)
   (b) Appreciation of results. (3)
   (c) Forecast of future economic trends affecting company or industry. (3)
   (d) Style. (3)
   (e) Mention of employees, key personnel, consumers, etc. (3)
6. Does text on earnings, taxes, wages, depreciation, dividends, surplus, etc., give an intelligent explanation of events and are they highlighted with charts and graphs to emphasize? (16)
7. Does report include some charts or description of company measured against the industry? (10)
8. Does report include some illustrations of plant, equipment, product, or other items to relieve text both in reading and appearance? (6)
9. Does report use colors to highlight and ease monotony? (5)
10. Does report contain information specially designed for:
    Employees? Shareholders? Suppliers? Consumers? Analysts and financial public? Community and general public?
    (2 points for each of six foregoing categories.)

Scoring by 55 companies: 75-100 points—10; 70-74—4; 60-69—16; 50-59—5; 40-49—6; 30-39—4; 20-29—4; 10-19—5; 0-9—1. Average rating: 55.7% of a possible 100 points.

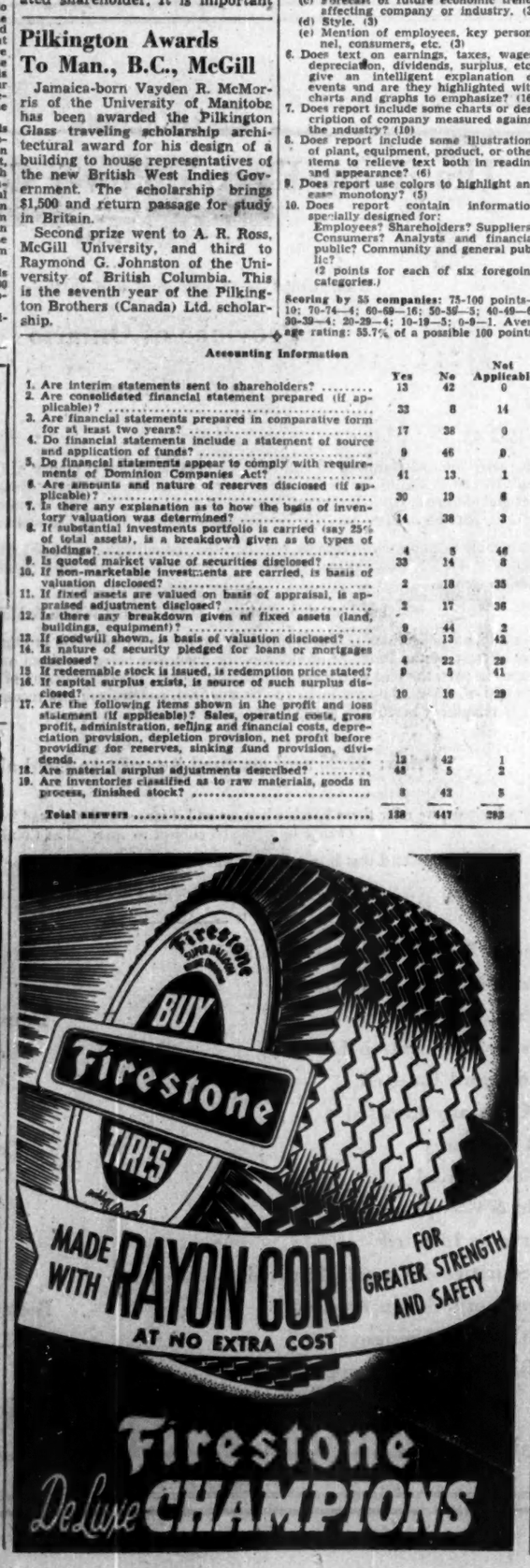
Accounting Information

	Yes	No	Not Applicable
1. Are interim statements sent to shareholders?	13	42	0
2. Are consolidated financial statement prepared (if applicable)?	33	8	14
3. Are financial statements prepared in comparative form for at least two years?	17	38	0
4. Do financial statements include a statement of source and application of funds?	9	46	0
5. Do financial statements appear to comply with requirements of Dominion Companies Act?	41	13	1
6. Are amounts and nature of reserves disclosed (if applicable)?	30	19	6
7. Is there any explanation as to how the basis of inventory valuation was determined?	14	38	3
8. If substantial investments portfolio is carried (say 25% of total assets), is a breakdown given as to types of holdings?	4	5	46
9. Is quoted market value of securities disclosed?	33	14	8
10. If non-marketable investments are carried, is basis of valuation disclosed?	2	18	35
11. If fixed assets are valued on basis of appraisal, is appraised adjustment disclosed?	2	17	36
12. Is there any breakdown given of fixed assets (land, buildings, equipment)?	9	44	2
13. If goodwill shown, is basis of valuation disclosed?	0	13	42
14. Is nature of security pledged for loans or mortgages disclosed?	4	22	29
15. If redeemable stock is issued, is redemption price stated?	9	5	41
16. If capital surplus exists, is source of such surplus disclosed?	10	16	29
17. Are the following items shown in the profit and loss statement (if applicable)? Sales, operating costs, gross profit, administration, selling and financial costs, depreciation provision, depletion provision, net profit before providing for reserves, sinking fund provision, dividends.	13	42	1
18. Are material surplus adjustments described?	48	5	2
19. Are inventories classified as to raw materials, goods in process, finished stock?	8	43	5
Total answers	138	447	293

Pilkington Awards To Man., B.C., McGill

Jamaica-born Vayden R. McMorris of the University of Manitoba has been awarded the Pilkington Glass traveling scholarship architectural award for his design of a building to house representatives of the new British West Indies Government. The scholarship brings $1,500 and return passage for study in Britain.

Second prize went to A. R. Ross, McGill University, and third to Raymond G. Johnston of the University of British Columbia. This is the seventh year of the Pilkington Brothers (Canada) Ltd. scholarship.



ROSAIRE COURTOIS

Senior partner, Courtois Fredette & Co., has been elected president, Institute of Chartered Accountants of Quebec.

Sask. Wool Mill Bought By Horn's

The Saskatchewan Government woolen mill at Moose Jaw has been sold to a company associated with the Horn Woolen interests in Eastern Canada.

"Horn's have been engaged in the manufacture of blankets and heavier woolen clothes in Canada since 1870," A. G. Kuziak, minister in charge of Crown corporations said. "This company will operate independently of the other plants in the Horn group under the name of Saskatchewan Wool Products Ltd.

"The main reason for the Horn interests' purchase of the Moose Jaw plant is to develop the use of Saskatchewan wool in the products of their other plants as well as to meet the increased market for yarn," Mr. Kuziak said.

HILLMAN Minx

THE ULTIMATE IN MOTORING THAT SAVES YOU DOLLARS—AND MAKES SENSE

Air conditioner heater, bumper guards, air oil bath and directional flasher units, standard equipment on all models.

You notice a saving the minute you buy your smooth, smart Hillman Minx. And added to the low original cost you save *still* more on driving expenses—over $200 a year on gasoline alone! All this with big car styling, comfort and performance. And Hillman's trade-in value is consistently higher than any other car in its class.

Strong, pocket-book-saving reasons why you should see your Hillman dealer today—and prove it to yourself!

HILLMAN Minx

ROOTES MOTORS (CANADA) LIMITED

Vancouver • Toronto • Montreal • Halifax

HILLMAN, HUMBER, SUNBEAM-TALBOT, COMMER, KARRIER, ROVER AND LAND-ROVER PRODUCTS

Baker's Sales & Service, Yonge St. & Oak Ave., Richvale, Ont. Tel: Richmond Hill Tu. 4-1114

Nixon's Garage, 500 Main St. North, Weston, Ont. Tel: CH. 1-3321

Northview Motors, 2270 Eglinton Ave. West, Toronto, Ont. Tel: RU. 1-1077.

Walker Motors, 5870 Yonge Street, Newtonbrook, Ont. Tel: BA. 1-7022.

Cronin Motor Sales, Coxwell & O'Connor Drive, Toronto, Ontario. Tel: GL. 5447-8.

Nordic Truck & Equipment Ltd. 106 Main Street South, Weston, Ont. Tel: CH. 1-1103

Shully's Motors Limited, 645 Eglinton Ave., West, Toronto, Ont. Tel: MA. 0363.

Yorktown Motors Limited, 623 Yonge Street, Toronto, Ontario. Tel: RA. 2184.

Zima Bros., 3262 Dundas Street West, Toronto, Ont. Tel: MU. 1125-6.

One of a series featuring R.C.A.F. squadrons

Squadron 422 was formed at Lough Erne, Ireland in 1942. Early in 1953 it was reformed as a Sabre jet fighter formation to become part of the NATO defence forces.

They helped forge the Allied victory

Hitting hard and fast at the enemy . . . striking at the U-boats . . . guarding vital convoys from the Arctic port of Murmansk to the Bay of Biscay . . . 422 Squadron proved a powerful arm in forging the Allied victory.

Originally formed as a flying boat unit . . . 422 Squadron again readies itself . . . equipped with Canadair-built F-86* Sabre jets . . . to stand on guard for freedom.

Canadair pays tribute to the men of 422 Squadron and the Royal Canadian Air Force . . . and joins all Canadians in honouring our guardian air force and its contribution to world peace.

*Made under licence from North American Aviation, Inc.

CANADAIR LIMITED, MONTREAL

CANADAIR — A Good Place to Work

John McCall says, what appeals to him most at Canadair is that workers are always encouraged to find improved ways of doing the job.

Mr. McCall originally came from Scotland, and has found working conditions so much to his liking that it wasn't long before his two sons decided to join him at Canadair. Starting in the machine shop, Mr. McCall has been well rewarded for his conscientious work, and today he is a leadhand with 16 men under his supervision.

There are many men like John McCall whose sons have joined them at Canadair. It is this spirit of good fellowship that makes men say: Canadair is a good place to work.

CAIS-19

JOHN R. GALE JAMES B. FAULKNER

The election of John R. Gale and James B. Faulkner to the Board of Directors of Nesbitt, Thomson and Company, Limited, is announced.

Mr. Gale has been associated with the Company for the past 22 years, and prior to the war was Manager of the Company's Saint John office. After four years of service in the Army he returned to the Company's head office in Montreal.

Mr. Faulkner has been Manager of the Company's Winnipeg office since 1933, a position which he presently holds. *

Auto Insurers and Agents Are Apart on These Points

Because of the allegations made by the Canadian Federation of Insurance Agents against the Dominion Board of Insurance Underwriters, the Dominion Board has issued a brochure reporting developments in the controversy to date.

The dispute arose over the cut in automobile insurance commission rates imposed by the companies (April 1) in an effort to keep automobile insurance rate increases to a minimum (The Financial Post, April 4). Agents objected to the cut.

The Agents' Federation on March 11 wrote the Dominion Board that their associations' counsels were unanimous that certain Board practices contravened the Combines Investigation Act and the Criminal Code in that they limit competition in the writing of insurance "to the detriment of the public."

The Federation states it should not and would not approve participation by its members in any illegal actions and that such action should be resisted. The March letter from the Federation added:

"If the Dominion Board of the Insurance Underwriters and its affiliated boards are prepared to give the Canadian Federation of Insurance Agents their positive assurance by April 1 next that all illegal practices will be discontinued, the Federation will be happy to advise its member associations thereof and to appoint a committee to discuss with the committee of the Board, the future relations between the Board and its affiliates and the Canadian Federation and its members."

What Board Says

Board counsel in reply states that the Board companies would neither engage in nor condone illegal practices, and know of no illegal practices being carried on by the Board or its member associations. To facilitate intelligent discussion of the differences at a joint meeting to be held the Board counsel asked the Agents Federation to identify fully the practices complained of.

The brochure comments that it is difficult to understand how the Federation is evidently prepared to forget or condone the Dominion Board's "contravention" of the Combines Act and the Criminal Code if the Board acts in future in accordance with the Federation's wishes.

Counsel for the Agents indicates the practices regarded as illegal are those mentioned by J. J. Quinlan, counsel to the Combines Investigation Commissioner, on the hearing regarding the application to incorporate Western Canada Underwriters and British Columbia Underwriters' Associations.

The Western Hearing

The brochure notes that while Mr. Quinlan enumerated various practices he did not say they were illegal. The Canadian Underwriters Association has been incorporated since 1937. Because of certain legal advantages, application was made to incorporate the two western bodies. These applications were opposed by certain western agency bodies and as "combines" were mentioned the Combines Investigation Commissioner became interested. Between 1950 and 1952 western agency bodies asked to have rules regarding non-intercourse and separation (of tariff and non-tariff companies) previously supported eliminated. These references in the application had to be deleted and the applications revised.

Board counsel listed the matters enumerated by Mr. Quinlan as the question of rate fixing; penalty of cancelation for infraction; limitation of membership to joint insurers; limitation of agents (sponsorship) and non-intercourse; and asked for information which of these it was desired to discuss.

The agents objected to:

1. Control of a large part of the insurance market in Canada through mandatory forms and rates, binding on all board companies and their agents.

2. Exclusion from membership of non-joint stock companies and such joint stock companies as cannot conform to Board requirements, and the prohibition of exchange of re-insurance with non-board companies.

3. Control of agents generally and of agents' remuneration.

4. Control of territorial associations by the Dominion Board.

Agent Suggestions

The Agents suggested the control of rates and policy forms be in the hands of territorial bureaus with open membership and in consultation with the agents. They also suggest assimilation of functions of the rating bureau and the Underwriters Survey Bureau and that fusing of the functions of the Underwriters Laboratories and the Canadian Standards Association be considered.

The Agents Federation urges removal of control of agents in writing insurance and in making agreements with companies.

The Board says that its leadership in insurance matters could be mistaken for or misrepresented as control.

It also categorically denies existence of obviously illegal practices or of practices against the public interest.

It also says that in so far as the Dominion Board sets a pattern for the insurance business, it can set it only for its own members which have less than 50% of the business.

A statement that agents are vitally concerned as being "representatives of the ultimate purchasers of insurance both as to coverage to be sold and rate to be charged" brings the comment that nowhere in commerce is the selling price fixed by the buyer. Company solvency depends on the adequacy of the rate for the form of cover and therefore rate and form are matters for the company itself to determine and not for the "representatives of the ultimate purchasers of insurance."

Agents are not excluded from participation in association decisions and there appears to be no restriction on "freedom of contract" between the agent and the company, except as regards commission; and as the commission forms a part of the rate charged the public to concede freedom in setting the commission would necessitate a change in practices by setting a net rate and allowing the public to evaluate the services of a particular agent.

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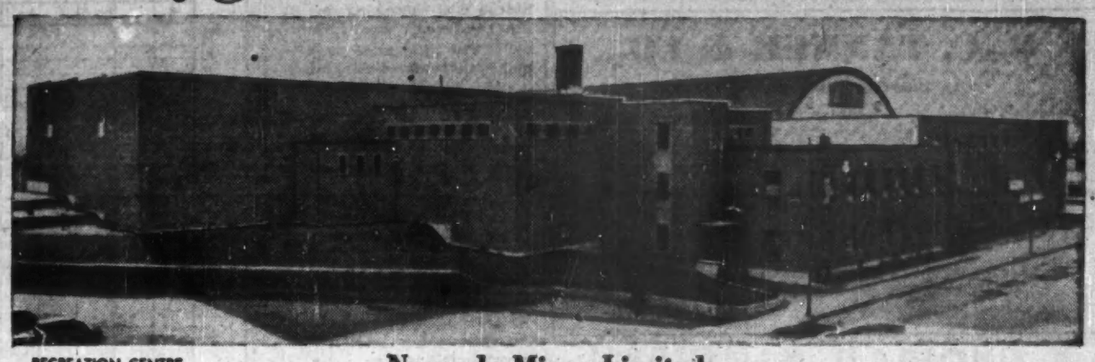

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TORONTO

COMPANY REPORTS

To assist readers in appraising and comparing company financial statements, The Financial Post has a uniform method of presenting corporation accounts. Variations from the companies' published reports are footnoted.

Public Utilities

INTERNATIONAL POWER CO. consolidated net profit of $4,325,207 for 1952 was 23.8% higher than 1951 net of $3,494,837.

Capital expenditures of consolidated subsidiaries totaled $3,138,508, reports President I. W. Killam. It is estimated that 1953 construction expenditures will be at least as high as those of 1952.

In January, 1952, and January, 1953, election was made under Section 95A of the Income Tax Act to be assessed and pay the special tax on amounts corresponding to the share dividends paid in 1951 and 1952.

Figures converted from foreign currencies have been shown at par of exchange, except for one subsidiary where they were converted at government official rates.

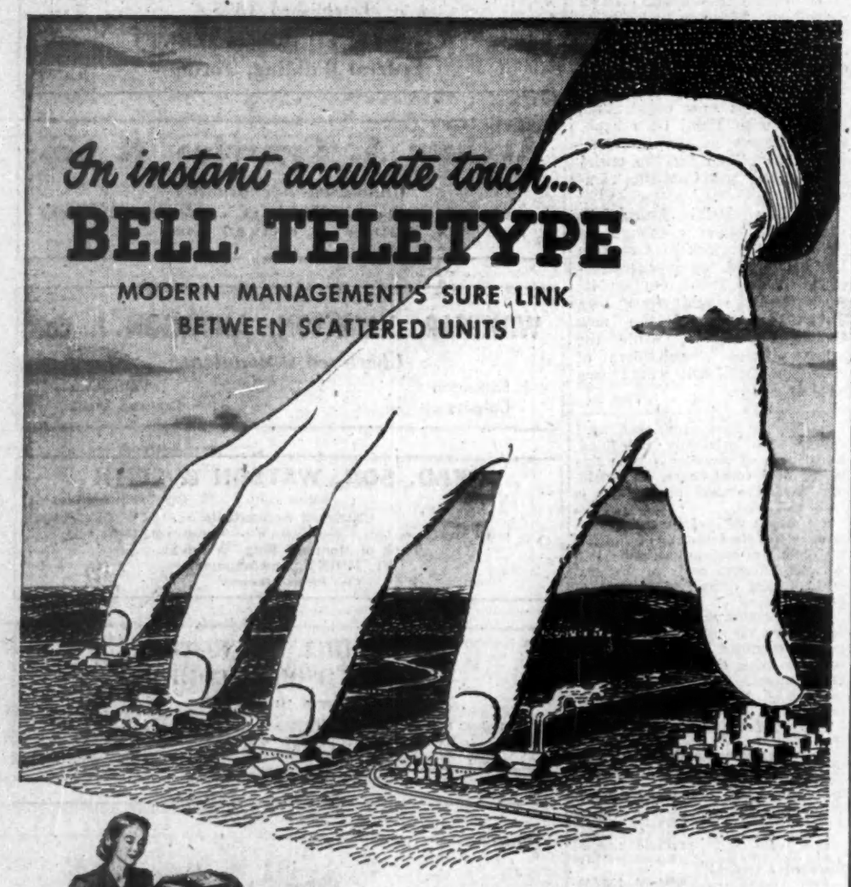
Accounts of Monterey Railway, Light & Power Co. are not included in consolidations. Its shares and debentures are included in "investments in subsidiary companies" in balance sheet.

CONS. INCOME ACCOUNT
(In Canadian currency at par of exchange)

Years Ended Dec. 31:	1952	1951
Net earning	$5,563,163	$4,893,500
Less: Bank int.	.....	494
Subs. dividends	30,105	38,534
Depr. & ren. res.	1,120,944	1,054,981
Cont. & gen. res.	141,408	156,513
Min. int. in surp.	89,125	84,140
Net income	4,172,583	3,578,818
Add: Other inc.	214,600	7,097
Less: Misc. exp.	61,976	91,078
Net profit	4,325,207	3,494,837
Less: 1st pref divs.	312,500	320,600
Common divs.	469,680	469,680
Surplus for year	3,542,027	2,704,557
Earnings per Share and Dividend Record:		
5½% pref.: Earned	$98.30	$40.95
Paid	5.50	4.58
Common: Earned	20.30	16.22
Paid	2.40	2.40

CONDENSED CONS. BALANCE SHEET

As at Dec. 31:	1952	1951
Cash & Dom. bds.	$2,103,458	$1,919,652
Accts. rec. less res.	1,423,271	1,033,327
Inventories	1,873,315	1,339,469
Total curr. assets	5,400,044	4,292,448
Misc. assets	136,406	107,947
Inv. in subs.	650,191	670,649
Fixed assets	32,452,423	30,152,140
Total assets	38,647,064	35,223,384
Bank loans	303,616	255,000
Accts., tax., etc., pay.	1,973,665	1,676,422
Divd. payable	117,420	117,420
Total curr. liab.	2,394,701	2,048,842
Trust acct.	47,537	47,537
Depreciation	9,381,555	8,575,129
Other res.	2,372,696	2,110,912
Min. int. of sub.	819,687	757,806
Tax-pd. undist. inc.	624,316	.....
Cap. surp re pfd. shs.	.....	1,415,105
Capital stock	8,931,730	10,631,730
Capital surplus	3,732,183	1,499,286
Earned surplus	10,942,649	8,125,112
Working capital	2,905,343	2,241,706



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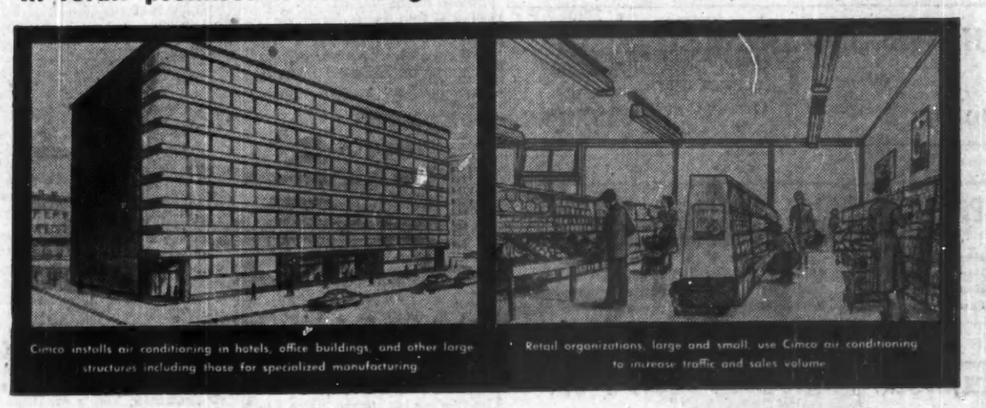

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Retail organizations, large and small, use Cimco air conditioning to increase traffic and sales volume.

York refrigeration air conditioning

Wherever people work or shop in enclosed premises, Cimco air conditioning shows tangible advantages. Owners of office structures benefit because 100% tenanty (and "waiting lists of tenants") mean maximum rental incomes, and real estate values which resist market fluctuations.

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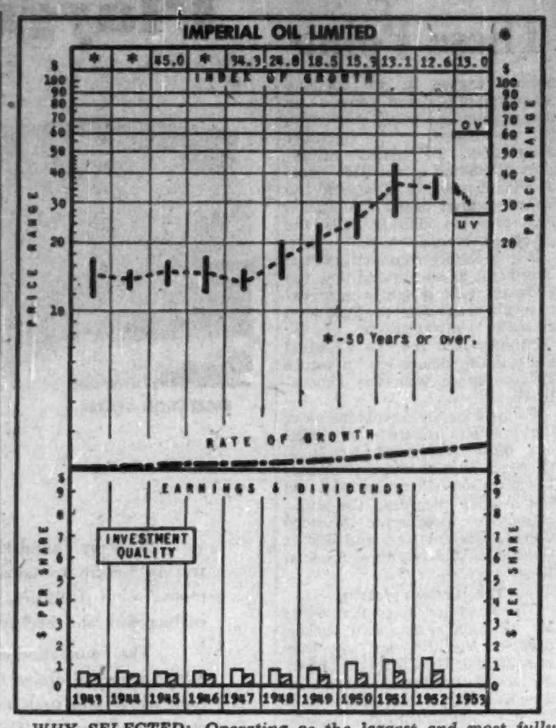
Selected Growth Stocks — Quarterly Review — By NESTOR

The Financial Post's exclusive series of Selected Growth Stocks was chosen by one of the continent's most prominent and successful investment advisers. Basic information on all 26 companies was given Jan. 10-April 4. Each will be reviewed quarterly. Publication of this series in The Post does not constitute a recommendation to buy these stocks.

Imperial Oil



WHY SELECTED: Operating as the largest and most fully integrated oil company in this country, Imperial has the outstanding record for oil discovery in Western Canada. Reserves should continue to expand as active exploration progressively develops the company's choice 25 million acres (5/6 of an acre) in the Canadian oil basin.

Current chart shows that at recent $29-a-share market price, Imperial Oil selling only 7% above its UV level, would have to rise 107% before hitting its OV level. 1952-53 high $40½ a share; low $28. Yield 2.76% at $29, based on 80c-per annum indicated dividend rate.

First quarter sales up from year ago, with estimated earnings of 32.7c a share, up 6% from last year's 30.8c first quarter net. Strong promotion of products this spring to help market increasing output of expanding plants.

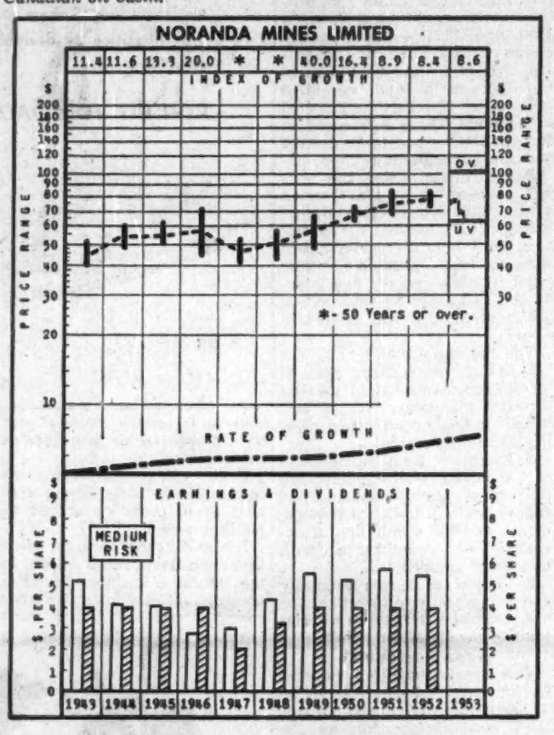
Revenues from crude output sold should rise with 25c-a-bbl. increase in wellhead prices just instituted in U. S. and expected to apply here too. But increase also means higher cost to Imperial on purchases of foreign crudes. Quite likely to mean higher end product prices.

Outlets for Canadian oil will be about double '52 average with completion of Trans Mountain and Superior-Sarnia pipelines late this year. Imperial's potential daily production from present wells nearly double actual output, so will be able to take advantage quickly of any new markets offered.

Additional refinery capacity being installed at Sarnia, Regina and Vancouver, as well as new catalytic polymerization unit at Winnipeg. Of nine refineries, only Halifax and Montreal will depend on foreign crude once Trans Mountain and Superior-Sarnia lines completed.

Once Alberta natural gas export question settled, additional source of revenue will open up for Imperial.

Noranda



WHY SELECTED: One of Canada's most important mining enterprises, Noranda is third in copper production and fourth in gold output. Active exploration for new reserves is under way and the company recently completed $30 million financing for development of huge copper deposits in the Gaspe area, for production of sulphur and iron from its large pyrite reserves, and for other development work. A large portfolio of investments is maintained, including a 44.5% interest in Kerr-Addison, leading Canadian gold producer. Diversification of the company's interests tend to moderate cyclical changes in earnings.

At recent $63½ a share market price, Noranda selling just 1% above UV level, leaving possible rise of 57% before it would reach its overvaluation level. 1952-53 high $85; low $63¼. Yield at $63½, 6.3%.

First-quarter earnings estimated at $1.68 a share ($1.50 in comparable '52 period), demand continuing good. Increased earnings reflected sales of copper at prices higher than those now in effect.

Work at Gaspe Copper Mines, in which Noranda has 95½% interest, about on schedule (mill due to start operating next year, smelter in '55.) Drilling so far confirming previous estimates of tonnage and grade. Big potential.

Slight easing in copper demand recently, though level still high. U. S. defense and stockpiling policy likely to be big factors in future outlook.

More orderly copper marketing conditions expected by company this year. Stable, reasonable prices should aid longterm competitive position in relation to other metals.

More than 51% of net profit in '52 from investment income, compared with about 8% prewar. Waite Amulet (copper-zinc-gold) big dividend payer, with substantial revenue from Mining Corp. of Canada and Anglo-Huronian Ltd. (exploration and holding companies) and Kerr-Addison (gold).

BOOKS FOR BUSINESSMEN

BEHIND THE SCENES OF BUSINESS by Roy A. Foulke; Dun & Bradstreet Inc.; 194 pages.

This is the first revision since 1937 of a work originally written in 1935 by a vice-president of Dun & Bradstreet for that company's clients.

With the life of a business concern averaging between six and seven years, there have been almost two turnovers during the past dozen years of pressure economy, the author notes. This means that a large segment of today's business communuity has had no direct experience with depression.

Many businessmen among the author's acquaintance have a vague feeling that a depression will come "in two or three years." Trained in the use of the credit analyst's tools, Foulke regards such predictions as mere guesses and feels that a reasonable forecast would limit itself to three or four months.

This, however, is not to deny the vital necessity of planning for future years. Managements who, for instance, "are willing to advertise today to build stability for tomorrow" are able to take the valleys and the peaks in the same strong stride.

To aid management in its planning, Foulke devotes a considerable amount of space to a review of accepted financial standards, such as capital, inventory, sales and net profit ratios.

BRAZILIAN TRACTION, LIGHT & POWER CO. had 14,229,744 ordinary shares issued and outstanding at May 31.

How To Read the Charts

INDEX OF GROWTH: The rate at which the value of the equity behind the stock is doubling as determined by the growth rate at which it entered the year. A figure of 5.6 for the present year would indicate that at its current growth rate, the equity value is doubling every 5.6 years.

PRICE RANGE: The annual high, low and mean price. Monthly ranges for the current year.

UNDERVALUATION AND OVERVALUATION PRICE LEVELS: Shown by the narrow horizontal lines above and below the stock's price range indicating price at which the particular stock is adjudged as underestimating or overestimating its future rate of growth. A stock showing a fast-growth rate will sometimes anticipate growth by two or three years. In this case, it may not be so attractive a purchase relatively as some other fast-growing stock that is not anticipating its growth beyond the immediate present. Other factors, such as rate of growth and investment quality, will also enter into the comparison an investor will want to make.

Without these UV and OV levels, a current quotation of, say, 55 or 75 would carry no significance regarding long-range value. The UV/OV levels also permit judgment as between one stock and another. They are not designated points of purchase or sale, nor do they attempt to show what will be a stock's bottom or top figure in any given year.

RATE OF GROWTH: The rate, as based on Nestor's tests, at which the company is showing underlying, or long-term, growth. This will determine the price trend of the company's common stock over a period of years and, in most instances, the trend of dividend payments.

Background and principles behind the selections by Nestor were discussed in a special article in The Financial Post, Jan. 10. A limited number of reprints are available on request.

Reorganization Planned For Can. Delhi Oil

Shareholders of Delhi Oil Corp., Dallas, Tex., were to vote June 25 on a company-sponsored reorganization plan to distribute holdings of Canadian Delhi Oil Ltd. to Delhi Oil holders. The move is believed to be designed to facilitate listing of Canadian Delhi stock on Canadian stock exchanges, and to put new capital into the Canadian organization.

Stock of Canadian Delhi is owned 80% by Delhi Oil and 20% by 11 individuals, including some officers and employees of the two companies. Capitalization of the Canadian company now outstanding is 1,625,000 common shares, par 10c. The U. S. company's capitalization consists of 2,579,394 common shares, and there are 18,790 additional shares held in the Delhi treasury.

Canadian Delhi Oil Ltd., shareholders will be offered a total of 1,599,242 shares of its stock, of which 1,279,394 would be bought by Delhi Oil and 319,848 by the minority stockholders. The U.S. company would then set up a new company in Canada, to be known as Canadian Delhi Petroleum Ltd. or a similar name.

All stock of Canadian Delhi Oil Ltd., except seven qualifying directors' shares, would be transferred to this new corporation, together with Delhi Oil's beneficial interest in the directors' shares, in return for the entire stock of the new Canadian company.

Canadian Delhi Petroleums Ltd. would then exchange its stock for the stock of Canadian Delhi Oil Ltd. on a share-for-share basis. Delhi Oil or its stockholders would thus own 2,579,394 shares of the new Canadian company, while the other present shareholders of Canadian Delhi Oil would own 644,848 shares.

Company Reports

To assist readers in appraising and comparing company financial statements, The Financial Post has a uniform method of presenting corporation accounts. Variations from the companies' published reports are footnoted.

Public Utilities

MEXICAN LIGHT & POWER CO. consolidated net profit of $2,461,233 for 1952 was 51.3% higher than 1951 net of $1,627,195.

Due to improvement during 1952 in value of Canadian dollar, average and closing rates for the peso in 1952 were 8.81 and 8.88 pesos to the Canadian dollar respectively, compared with 8.21 and 8.54 in 1951.

Increase of 4.2% in gross revenue reflects the 7.8% growth in amount of energy sold during 1952, states Chairman G. S. Messersmith. Sales totaled 1,657 million kwh (1,541 million in 1951).

Commencing with October billings, there was an adjustment factor in company's rates, authorized as compensation under collective labor agreement of Feb. 16, 1952.

Although most operating expenses increased during 1952, thermal generation costs were reduced due to improved water conditions, says the chairman. Year's earnings were sufficient, as in 1951, to require payment to the Mexican Government of annual amount representing 1% of value of company properties excluding permanent hydraulic works. This totaled $657,832 ($590,279 in 1951).

Due to a cash shortage, company arranged with the government for a delay in this payment, which was due in April, 1952, until early in 1953. It was found necessary to make a similar arrangement for the payment due in April of this year.

Company's cash position also made it necessary to arrange for a short-term line of credit with the Mexican Government. The entire amount available in January, 1953, amounting to 15,663,103 pesos, was withdrawn in that month. This credit is repayable in monthly installments during the year.

Hydrological conditions in 1952 were favorable and no restrictions on use of electric energy had to be imposed, reports General Manager G. Maryssael. Energy generated in company's hydro-electric plants was 1,234 (809) million kwh; that received from interconnected plants of Federal Commission of Electricity 390 (321) million kwh; and generation in Company's thermoelectric plants 554 (879) million kwh. Transmission and distribution losses were 21.38% (20.25%).

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Sales to industrial consumers, including mines, totaled 852 (798) million kwh, an increase of 6.7%. Energy distributed in the Mexico City area was 1,613 (1,492) million kwh. At year-end, company had 495,636 (485,251) customers, of whom 871 (861) were industrial customers supplied at high tension.

Tramways system paid 2,793,908 pesos during 1952, to be applied against previous years' billings. Charges for power supplied in 1952 were 2,766,945, leaving an outstandbalance at year-end of close to eight million pesos. "In spite of all our efforts, no real progress has been made in the liquidation of this debt," says Mr. Maryssael.

Gross additions for work completed in 1952 or in progress at year-end totaled $16,325,386, while retirements of property amounted to $378,238, leaving net increase in property account of $15,747,148 ($19,591,223). Here are major items in company's construction program:

(a) Steam plant at Lecheria, with two turbogenerators, is practically completed. First 33,000 kw unit was placed in service Oct. 29, 1952, and second 33,000 kw unit April 7.

(b) Civil works of Patla hydro-electric plant have progressed more slowly than originally scheduled. Excavation of tunnel has been finished, and construction of intake and diversion dam at Tepexic is well advanced.

(c) About 60% of concrete foundations for steel towers of the 220 kv double circuit transmission line between Necaxa and the Federal District was completed at end of 1952.

Labor conditions were very difficult during the entire year, says the general manager. Early in the year, a major crisis took place with the labor union. After a brief strike on Feb. 4, a new agreement was signed Feb. 16.

Annual meeting is June 30 at Toronto.

CONS. INCOME ACCOUNT

Years Ended Dec. 31:	1952 $	1951 $
Gross oper. earn.	26,307,371	23,248,733
Total net earn.	6,881,027	5,703,143
Less: Deprec.	3,319,000	3,271,000
Amort. rts., etc.	186,223	186,223
Bond int.	1,467,853	1,361,207
Inc. deb int.	246,708	257,516
Net profit & surp. for Year	2,461,233	1,627,196

aCharged each year but payable only to extent earned.

Times Bond Interest Earned:a

Before deprec. and amort.	4.32	4.00
After deprec. and amort.	2.68	2.20

aAfter all other interest.

Earnings per Share and Dividend Record:

Preferred	$2.68	$1.91
Common	0.99	0.44

None paid on either stock.

CONDENSED CONS. BALANCE SHEET

As at Dec. 31:	1952	1951
Cash	$975,759	$2,192,243
Accts., etc., rec.	5,261,905	6,128,818
Inventories	3,625,204	4,051,555
Total curr. assets	19,758,918	22,372,719
Reorg. exp.	1,164,879	1,168,000
Misc. assets	1,287,141	1,317,433
Fixed assets	167,585,656	131,230,506
Total assets	189,796,595	156,088,658
Accts. pay.	7,218,365	5,772,223
Accr. int.	1,170,180	1,230,097
S.f. pay due	677,536	
Total curr. liab.	9,070,081	7,002,413
Def. liab.	9,220,252	7,777,250
Def. loan	1,124,277	
Funded debt	50,847,881	46,441,663
Depr., etc., res.	60,239,101	47,862,606
Capital stock	40,535,000	40,535,000
General res.	15,420,970	15,420,970
Earned surplus	3,307,633	2,746,450
Working capital	1,687,837	8,369,306

$1 Million Legacy For U. of N. B.

From Our Own Correspondent

SAINT JOHN—The University of New Brunswick has received a bequest of $1 million from the late Fred Magee of Port Elgin who died last month. Interest from the money will be used to defray needy-student education costs at the university. Any yearly balance from investments will be divided equally between the university and Department of Education for assisting vocational training. Mr. Magee was a former N. B. cabinet minister, a prominent industrialist and director of the Bank of Canada.

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HARRY J. CARMICHAEL

has become a director, Hiram Walker-Gooderham & Worts Ltd.

Short Position Rises on TSE

Semi-monthly short position of the Toronto Stock Exchange on June 15, eliminating odd lots on members' books, aggregated 549,970 shares of 168 issues, compared with 534,533 shares of 175 issues on May 29.

Largest net changes in individual stocks were:

Stock	Shares	Stock	Shares
Abitibi	+2,100	Donalda	+7,500
Aluminium	+1,750	E. Metals	—5,400
Anacon	+5,800	Graham-B.	+14,900
Bonville	+9,000	Negus	—6,500
Brilund	+8,200	Nesbitt L.	+17,900
Brunston	—10,200		
Dom. Asb.	—6,250		

Here are short positions in detail:

Stock	Shares	Stock	Shares
Abitibi	4,000	Harricana	1,500
Acadia-Uran.	500	Headway	2,500
Ajax	100	Hollinger	100
Akaitcho	1,000	Homer	1,500
Albermont	900	How. Smith	200
Algoma Stl.	150	Hudson Bay	1,075
Aluminium	1,950	Imp. Oil	4,000
Anacon	13,400	Inspiration	19,300
Aquarius	2,000	Int. Nickel	900
Argus	500	Jacknife	1,000
Ascot	5,300	Jupiter	100
Avillabona	500	Kerr-Addison	500
Barnat	1,000	Labrador	100
Barvue	2,700	Lake Osu	500
Base Metals	500	Lynx	2,000
Basku	5,500	Man. & East.	500
Bell Phone	700	Massey-Harris	2,000
Bellekeno	500	Mindamar	300
Bohjo	500	Minda Scotia	1,000
Bonville	18,100	M. & O. Paper	50
Bralorne	100	Negus	13,500
Brilund	12,100	Nesbitt	37,700
B. A. Oil	2,300	New Bidlam.	1,000
Broulan	100	N. Brit. Dom.	400
Brown Co.	100	New Calumet	4,100
Brunhurst	500	New Concord	200
Brunston	3,000	N. Continental	300
Buffalo Ank.	1,000	New Delhi	3,100
Buffalo Cdn.	1,000	N. Dickenson	650
Bulldog	500	N. Fortune	2,500
Calgary & Ed.	600	N. Highridge	4,200
Callinan	1,000	N. Laguerre	2,000
Calvan	100	N. Larder U	7,600
Can. Pack. B	100	Newlund	1,000
Cdn. Breweries	100	New Marlon	1,000
Cdn. Celanese	75	Noranda	500
Cdn. Decalta	1,000	Norgold	5,000
Cdn. Devonian	200	Normetal	1,900
C.P.R.	890	North. Can.	1,000
Cdn. P. Line	1,800	Nubar	500
Cassiar	5,500	Okalta	500
Cent. Explor.	1,500	Ont. Pyrites	1,900
Chesterville	1,000	do. B wts.	3,100
Chimo	28,100	Osisko	500
Citra-Lartic	500	Pacific Pete.	200
Cobalt Cons.	2,000	Parbec	1,000
Coldstream	500	Paymaster	1,500
C. Allenbee	1,000	Pend Oreille	100
Cons. Smelt.	5,350	Peruvian	200
Cons. Paper	50	Ponder	400
Conwest	100	Preston	600
Corby A	100	Price Bros.	500
Devon Leduc	1,200	Que. Nickel	4,500
Dome	100	Quemont	900
Dome Explor.	100	Red Poplar	1,000
Dom. Asbest.	6,800	Rio Prado	1,000
Dom. Steel	700	Rix Atha.	500
Donalda	9,500	Rowan	2,000
E. Malartic	1,100	St. Lawrence	1,600
East Rim	20,600	Sand River	1,000
E. Sullivan	1,600	Sapphire	700
East. Metals	8,500	Scurry	400
El-Sol	3,000	Selburn wts.	1,000
Em. Glacier	200	Shawkey	2,000
Eureka	10,000	Sherritt	2,700
do. wts.	2,000	Silver-Mill.	13,750
Falconbridge	200	Simpsons	200
Fargo	2,300	Stanwell	15,500
Fenimore	9,200	Starratt	2,000
do. wts.	2,000	Steep Rock	8,900
Ford A	845	Sweet Grass	3,500
Frobisher	500	Toronto Elev.	150
do. wts.	1,300	Trad. Fin. A	100
Gatineau	385	Trans Mtn.	600
Gen. Motors	200	Trans. Telev.	18,200
Gen. Stl. Wares	100	Tungsten	20,500
Goldcrest	2,000	Un. Asbestos	42,800
Golden Man.	500	Un. Keno	1,900
Graham Bou.	16,000	United Oils	800
Grandines	500	Violamac	6,600
Gt. Lk. Paper	400	Walker G & W	275
Gridoil	5,800	W. Tungsten	100
Gunnar	12,350	Yk. Bear	1,400
Gypsum	200	Yukeno	1,600

Bid $6.93 a Share For Mexico Tram

The principal shareholder of Mexico Tramways Co., Toronto, has sold all its shares at $6.93 (U.S.) per share, with the seller paying transfer taxes and incidental expenses. Contract for the sale contains a commitment by the purchaser to offer all other shareholders the same price, $6.93 per share less transfer taxes and bank handling charges.

Shareholders are to be notified that for a period of 60 days commencing on or before July 17, National Trust Co., Toronto, and offices of Guaranty Trust Co. of New York at London, Paris and Brussels, will accept registered share certificates and bearer share warrants, and make payment subject to local laws and, in case of registered certificates, to acceptance of documents of transfer by the company's transfer agent.

With 265,312 of an authorized 300,000 shares outstanding, the amount involved in the share offer is $1,838,612. Directors have so far declined to identify the principal shareholder or to reveal the number of shares held by it.

Brazilian Traction Utilities Extended

All services of Brazilian Traction, Light & Power Co. were increased in the first five months of 1953 as compared with the same period last year. Number of telephones in service at May 31, 1953, was 523,577, an increase of 37,086 or 7.6% since the corresponding date in 1952.

Electric power sales in the five-month period were 1,856,926,500 kwh, 1.6% greater than the total of 1,827,985,317 in the 1952 period. Sales of gas totaled 3,586,150,290 cu. ft. from January to May, 1953, up 2.2% from 3,510,102,844 in the same five months of 1952.

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YOU ASKED US

INCOME TAX

Depreciation Recapture

In 1931 I bought a commercial building for $22,300. At the end of 1948, depreciation written off totaled $8,467, leaving a depreciated value of $13,732. Between Dec. 31, 1948, and Dec. 31, 1952, further depreciation of $3,795 was written off, leaving a depreciated value at the end of 1952 of $9,938. If I now sell the building for $25,009, how do I stand as regards the depreciation written off? Must I add part or all of it back to my 1953 income as recaptured depreciation?

For depreciation recapture purposes one considers only the situation after Jan. 1, 1949. Thus the value to be taken into consideration in your case is the depreciated value at that date — or $13,833. In the succeeding years, you have brought the depreciated value of the building down to $9,938. When you sell for $25,000 you must take into consideration the depreciation deducted between Jan. 1, 1949, and time of selling, and add this back to your income for tax purposes.

If you have other property of the same class, you must take this also into consideration when calculating your depreciation and the amount to be recaptured. It would be wise to consult your income tax inspector on the details. Any profit over your depreciated capital cost as at Jan. 1, 1949 is considered capital gain and non-taxable. When you have calculated the amount of depreciation to be recaptured by the tax department, you then have an option of spreading it back over the years during which the depreciation was deducted, say 1949-1953.

INVESTMENTS

Placer, Sag.-Que.

Could you give me some information on Placer Development Ltd. and Saguenay-Quebec Telephone Co.? Are shares of these companies listed?

Placer Development was incorporated in British Columbia in 1926 to secure for investigation and prospecting, options on likely gold placer (alluvial) and other mining properties in various parts of the world.

It acts as a holding company, and has disposed of properties developed to operating companies. Since the war, it has broadened its interests, until now its main earnings are from a lead, zinc and tungsten property in British Columbia, with smaller earnings from gold and oil interests.

Placer earnings in the five years ended April 30, 1952, were in the $350,000-$490,000 per annum range, or 42c-60c per share.

Because Canadian Exploration, the subsidiary which operates the base metal properties, and Coronet Oil, which owns and operates producing wells in the United States, are now wholly owned by Placer (formerly they were controlled through another subsidiary), earnings for the year ended April 30, 1953 are expected to show a sharp jump. The annual report covering this period is expected shortly.

Dividends last year were 75c a share in June and $1 a share in December. A dividend of $1 per share was paid June 18 this year, reflecting the higher level of earnings.

Saguenay - Quebec Telephone Co. owns and operates a telephone system in the Lake St. John area and the Saguenay River Valley in Quebec, having telephone exchanges at all principal points. Head office is at Chicoutimi, Quebec.

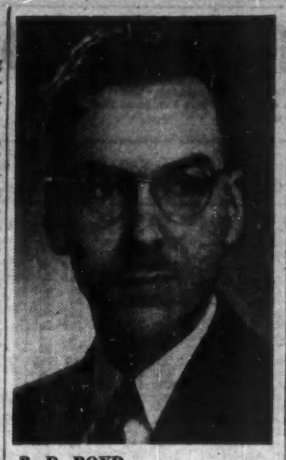
Bell Telephone Co. of Canada acquired control of the company in 1948 and takes an active interest in management. Through connection with the former company's system, service is provided to all points of Canada, United States and elsewhere.

At the end of 1952, the company had 18,301 telephones in service, a 34.1% gain from a year earlier. Capital expenditures for the year totaled $924,821.

Gross revenue climbed to $1,530,006 from $1,197,962 in 1951. Toll service revenue was up 12.8%, while local service revenue rose by 59.3%, reflecting increased tariffs which became effective January 6, 1952, growth in the number of telephones in service, and the change to extended area service in Chicoutimi and surrounding localities.

Net profit for 1952 at $166,897 was up 70.1% from the previous year, equal to 47c (29c in 1951) per common share. The company has applied for an increase in its tariffs. Dividends are being paid at the rate of 60c per share per annum.

Saguenay - Quebec Telephone shares are not listed on any exchange. Placer Development shares are listed on the Toronto, Montreal and Vancouver stock exchanges. According to our information, Saguenay - Quebec common shares are quoted on the unlisted market at $8 a share bid, $10 asked.



R. D. BOYD

has been named president, Montreal Personnel Assn.

COMPANY REPORTS

To assist readers in appraising and comparing company financial statements, The Financial Post has a uniform method of presenting corporation accounts. Variations from the companies' published reports are footnoted.

Foods

ESSEX PACKERS LTD., Hamilton, Ont., net profit of $70,392 for year ended March 28, 1953, was 9.7% higher than previous fiscal year's net of $64,157.

Livestock slaughterings increased 65% and sales tonnage, 55%, reports President H. Poworoznyk. Several new lines of canned meats and other specialty items were introduced.

One quarterly preferred dividend arrear will be paid July 2. "It is to be hoped that future operating profits will permit a continuance of such payments," says the president.

First two months of current fiscal year have been satisfactory, says Mr. Poworoznyk, and normal increase in business along with steadily improving operating results may be anticipated.

INCOME ACCOUNT

Years Ended:	Mar. 28 1953	Mar. 29 1952
Net earnings	$241,232	$166,548
Add: Other income	.....	3,945
Less: Depr.	86,019	81,429
Taxes	84,921	34,907
Net profit	70,392	64,157
Less: Pref. divds.	16,871	.....
Surplus for year	53,521	64,157
Earnings per Share and Dividend Record:		
1st pref.: Earned	$7.82	$7.13
Paid	1.37½	.....
2nd pref.: Earned	11.97	10.43
None paid.		
Common: Earned	0.38	0.32
None paid.		

Arrears on 1st pref. stk. totaled $8.12½ per sh. at Jan. 2, 1953.

CONDENSED BALANCE SHEET

As at:	Mar. 28 1953	Mar. 29 1952
Cash	$290,383	$163,043
Mkt. invests.	200	200
Accts. rec. less res.	347,793	684,221
Inventories	1,072,588	580,016
Total curr. assets	1,930,967	1,344,480
Prep. & def. assets	66,157	47,513
Misc. assets	22,408	22,786
Fixed assets*	812,671	898,912
Goodwill, formulas	51,168	51,168
Total assets	2,883,366	2,776,841
Bank loan & o/d	937,276	755,125
Other curr. liab.	356,598	82,840
Total curr. liab.	1,493,872	847,965
Reserves	4,918	1,269
Mtge. pay.	.....	135,672
Pref. stok fund	18,121	12,769
Capital stock	1,149,900	1,149,900
Capital surplus	22,279	22,580
Surplus	193,676	205,786
*After depr. of	388,346	303,083
Working capital	437,099	496,515

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THE WEEK'S QUOTATIONS

Montreal and Toronto Winnipeg, Calgary and Vancouver

Quotations here listed are the official exchange prices for listed stocks including curb market quotations. For unlisted stocks, quotations by unlisted dealers are given. The Financial Post cannot accept any responsibility for these quotations.

WEEK ENDING JUNE 19, 1953

Range 1953 High	Low	Div. Rate $	Yld %	Company	Sales	Last June 12	Week end. June 19 H	L	Close
14¼	12¼	1.80	7.6	Abitibi	3790	13¼	13¼	12¼	12¼
26½	25	1.80	8.5	Do. $1.80 pref	3075	26½	26½	25	25
7¼	6¼	.50	7.1	Acadia Atlan...	335	6¾	7	6¾	7
100½	90½	5.00	5.6	Do. 5% pref..	60	90½	100	100	100
16½	16½	1.20	6.9	Do. A pref..	320	17¾	17¾	17¼	17¼
3.85	3.00	-	....	Alta. Cons. Gas	250	3.10	3.15	3.00	3.15
2.20	1.50	-	....	Albt. Dist.	900	1.60	1.60	1.50	1.50
2.20	1.50	-	....	Do. V.T.	500	1.55	1.50	1.50	1.50
49¼	33½	-	....	Algoma Steel ..	2510	34	34½	33½	34½
24	21½	1.00	4.2	Alum of Can p	200	23	23½	23	23½
102½	100	3.25	3.1	Do. 4½% pref.	1782	102	102½	102	102½
53½	41½	e2.00	....	Aluminum	4864	44	45	43½	45
10	8¼	e.40	....	Andian Nat. ..	100	8½	8½	8¼	8¼
25	22½	2.00	8.7	Ang. Cdn. Pulp	50	24½	23	23	23
41	37	2.25	6.1	Ang. Can. Tel p	310	37	37	37	37
8½	7	.60	7.5	Ang. Nfld.	3115	7¼	8	7	8
12¾	11¼	.60	5.0	Argus	1560	12¼	12¾	12	12
85	78½	4.50	5.7	Do. 4½% pref.	10	80	79	79	79
27¼	23½	1.00	4.0	Asbestos	2931	24½	24½	24½	24½
19	16	1.00	6.1	Ashdown Hd B	45	16¼	16¼	16¼	16½
154	105¼	4.00	3.8	Assoc. T. & TA	2	154	105¼	105¼	105¼
231	152	1.00	6.1	Atlas Steels ..	1855	17	17¼	16¾	16¾
91	71	1.30	....	Auto Electric ..	20	71	83	81	81
6	4	e.15e	....	Auto Fabric A	100	4	4	4	4
24	23	†.50	....	Bk. Can. Nat.	830	23¾	23¾	23¾	23¾
25	21	1.20	3.6	Bk. Montreal ..	1900	33¼	33¼	32½	33
43	39	1.60+$.20	Bk. N. Scotia	1301	40¼	40¼	40	40¼
43	38½	1.40+$.20	Bk. Toronto ..	110	41	41	40¼	40¼
45	35½	2.00	6.3	Bathurst Pr. A.	440	36½	36½	35¾	36
23¼	15¼	1.75	....	Do. (B)	80	15¼	15¼	15¼	15¼
8	8	e1.40+1.15		Beatty Bros. ..	225	7¼	7	6¾	6¾
14	12	e.60+1.10		Belding Cort. ..	155	13	12¾	12	12¾
14	12¾	.70	5.5	Do. pref.	20	13	12¾	12¾	12¾
40	37½	2.00	5.1	Bell Telephone	23894	39	39½	38¾	39½
11¼	9¾	1.00	10.1	Brazilian Tr. ..	22650	10	10	9¾	10
21¼	17½	e.42½	....	Brit. Amer. Oil	3212	19¼	19¼	17¾	17¾
7¾	6¾	6.00	8.1	B.C. Elec. 4% p	120	78	78	77½	78
57	47	4.75	5.2	Do. 4½% pref.	65	92	93½	92½	92½
50¼	45½	2.50	5.2	Do. 5% pref. ..	710	49	49	48¾	48½
6.75	4.15	.40	7.6	B.C. Forest	3605	5.12½	5.05	5.25	5.25
15½	11¾	.75	6.0	B.C. Packers A	345	13	13	12½	12½
7	7	-	....	Do. (B)	930	8	8	7¼	7¼
30	23	1.00	4.0	B.C. Power A.	1295	35	35½	34½	34½
8½	6½	-	....	Do. (B)	550	7¾	8	7	7
23	22	2.00	5.7	B.C. Tele.	626	35¾	35	34¾	35
.80	.55	-	....	B. C. Turf	1900	.75	.75	.75	.75
124	98	-	....	Brown Co.	4432	81	81	81	81
83	66¾	e5.00	....	Do. 1st pref.	20	66¾	66	66	66½
49¾	45½	e3.00	....	Do. 2nd pref.	75	47	46	47	49
8½	5	.60	8.8	Bruck Mills B.	200	6¾	7	6¾	6¾
40	34	1.80	4.8	Building Prod.	217	38	37½	37	37½
20	16	3.00	6.1	Burns & Co. A	10	49	49½	49¼	49½
36	29½	2.00	6.2	Do. (B)	435	32¼	32½	32	32¼
81	74	.45	6.0	Burrard D.D. A	100	72	75	74	75
124	114	.80	5.7	Calwell Linen	225	14½	15	14	14
3.50	2.90	.10	3.2	Canada Bread ..	15	2.90	3.00	3.00	3.00
87	72	e2.00	....	Canada Cement	1085	72½	73	72	72½
29¼	26½	1.30	4.4	Do. pref.	965	29	29¼	28½	29¼
7¼	6	-	....	Can. Cr. Stone.	15	6	6	6	6
18¼	16	1.00	6.4	Can. Dom. Sugar.	945	17¼	17¼	17¼	17¼
10	7	.60	5.3	Can. Foils	200	10	7¾	7¾	7¾
38	33	1.50+$.50		Can. Forg. A.	35	33	33	33	33
23	20	1.20	5.8	Can. Iron	545	20¾	21¼	20¾	20¾
84	80	2.00++$.50		Can. Malting ..	249	83	83½	83	83½
38	33½	1.50	4.3	Can. Packers A	25	35½	35½	35¼	35½
39¼	32½	1.50	5.0	Do. (B)	415	35¼	35¾	35	35¾
55	49	†1.70	....	Can. Perman. ..	225	53½	52½	52½	52½
101¼	100	5.00	5.0	C. Safeway 1 p	80	101¼	101	100½	101
101	96½	5.00	5.0	Do. 2nd pref.	70	101	101	101	101
82	70	1.00	1.3	Can. Steamsh's	129	79	79	78¼	78½
51	45	2.50	5.2	Do. pref.	205	49	49	48	48
15	13	.80	5.9	Can. Vinegars..	230	14	14	13	13¾
84	70	3.00	4.0	C. W. Cable B.	20	77	75	75	75
18	15	1.00	3.8	Can. Bk. Com ..	1405	31	31½	30¾	31½
19¼	17	†.75	....	Can. Breweries	2710	18¼	18¾	18¼	18¾
49	34½	1.25	3.5	Can. Bronze	400	35¼	35¾	35	35¾
33½	25½	2.00	7.7	Can. Canners ..	1195	26¾	27	26	26
24	18¼	.80	4.4	Can. Car & Fy	7162	17¾	18¼	18	18¼
20½	17	1.00	5.3	Do. pref. A..	1150	18¼	19	18¾	19
20	16	1.00	6.2	Can. Celanese..	1150	16¼	16¼	16	16¼
24	22½	1.75	5.1	Do. pref.	687	34¼	34¾	33¾	34
25	18½	1.00	5.0	Do. $1 pref. ..	60	20	20	18¾	20
14	9½	-	....	Can. Chem.	948	9¾	9¾	9¾	9¾
4.15	3.00	†.07½	....	Can. Colliers..	200	3.20	3.15	3.15	3.15
48	34	†1.05	....	Can. Cottons ..	275	35¼	35½	35¼	35½
25½	24	1.25	5.0	Do. pref.	500	25	24	24	24
48	45	1.70	3.7	Can. Dredge ..	780	46	46	45	46
251	211	1.00	4.4	Can. Fairb.	240	23½	23	22	23
4	2½	-	....	Can. Food Prod	370	3.30	3.70	3.00	3.00
62	50½	4.50	8.2	Do. pref.	20	55	55	55	55
800	410	8.00++4.00		Can. Gen. Elec	263	440	438	435	438
25½	22	1.10++.15		Can. G. Inv. ..	140	23¾	24	23¼	24
101	94	.80	0.4	C. Ice Mach. A	100	90	91	91	91
42	34	†.60	....	Can. Indust. ..	1682	34¼	35¼	34	34½
170	146	7.00	4.7	Do. pref.	2	152	150	150	150
95	83	†3.50	....	C. Ingersoll R..	25	93	89	89	89
4.65	3.25	-	....	Can. Javelin ..	19500	3.25	3.25	2.95	3.40
23½	16	-	....	Can. Locomo. ..	25	17½	17½	17	17
2	1	.05	....	Can. Marconi ..	261	3	3¼	3¼	3¼
15½	13	.50	3.8	Can. Oil	470	13½	13¾	13	13
100½	97	5.00	5.0	Do. 5% pref. ..	285	100	100	99½	100
33¼	24½	†1.50	....	Can. Pacific ..	8372	26½	26¾	24½	26¼
3.15	1.00	†.04	....	Can. Propane..	500	1.13	1.00	1.00	1.00
35	27	1.50	7.0	Can. Tire	170	35	35	35	35
20	19½	1.00	5.0	Do. pref.	70	20	20	20	20
100	95	5.00	5.0	C. Utilities pf..	15	99	100	100	100
19	15½	1.00	6.1	Can. Vickers ..	790	16¼	16¼	16	16¼
8½	6	e.40	....	C. Wallpaper B	100	6	6¼	6¼	6¼
10½	8½	.50	5.8	C. W. Lumber..	16290	8½	8½	8½	8½
72	55	2.00	3.6	C. Westingh'se.	3	57	55	55	55
104½	104½			Casement Ind p	15	....	104½	104½	104½
19	17	.15+†.15e		Catelli Food A.	200	17¼	17¼	17¼	17¼
9½	9¼	.40	4.2	Cent. Can. Inv.	100	9	9½	9¼	9½
6¼	5	.50	10.0	Chatco Steel pf	100	5	5	5	5
1.85	1.18	†.05	....	Chem Research	21350	1.27	1.29	1.20	1.23
14	9¼	1.00	10.5	Circle B Knit A	10	9½	9½	9½	9½
4.10	2.70	-	....	Claude Neon A	100	3.90	3.90	3.90	3.90
3.95	3.15	.24+$.03		Coast Brew. ..	800	3.30	3.40	3.35	3.40
18½	15	-	....	Cochrane-D	100	16¼	15	15	15
12	11	.80+e1		Do. (A)	10	80	79	79	79
16¼	12½	1.00	7.8	Cockshutt Farm	4815	13	13	12¾	12¾
80	72	-	....	Comb. Enter. p	13	75	75	75	75
32	31	-	....	Comm. Alcohol	600	31	31	31	3
55	50½	-	....	Conf. Life	10	52½	55	55	55
9¼	7	†.50	....	Cons. Bakeries	225	7¼	8	7	8
1.15	1.00	-	....	Cons Div Sec A	95	1	1	1	1
27	25	1.50	7.0	Do. pref.	25	25	25	25	25
38½	34¼	1.50++1.75		Cons. Paper ..	5752	36	36½	35	35½
8	5½	†.12½	....	Cons. Press A..	540	8	8	8	8
31	2	-	....	Do. (B)	100	3.50	3.25	3.50	3.25
24½	24½	†.50+.55		Cons. Smelters	10172	26	26½	24½	26
20	19½	1.00	5.0	Cons. Text. pf.	30	20	20	20	20
16½	14	.80	5.1	Consumers Gas	1153	15¾	15¾	15¾	15¾
24¾	21½	1.50	6.3	Consum. Glass.	335	24½	24	23	24
10½	8	†.70	....	Corbys A	1240	8½	8½	8	8½
10	8	†.70	....	Do. (B)	50	8½	8	8	8
98	95	5.00	5.3	C. P. Box 5%pf	5	96	95	95	95
37½	35	2.00	5.7	Crown Cork	30	35	35	35	35
115	110	5.00	4.5	Crown Trust ..	8	110	112	112	112
7¾	6¾	4.00	5.9	Crow's N. Coal	25	69	68	68	68
42	38	-	....	David & Fre. A	30	40½	40½	40½	40½
98	90	†1.50	....	Do. (B)	190	97	90	72	90
14¾	11½	1.50	11.1	Davis Leath. A.	250	13¾	13½	13¼	13½
44	42	•	....	Do. (B)	60	41	41	41	41
85	75	$1.00	....	De Havilland A	10	80	76	76	76
28	24½	1.20+$.50		Distil-Seag. ..	6177	26	26½	25¾	26½
30¼	27½	1.20	4.0	Dom. Bank	362	30	30	29¾	30
85	71½	1.60++1.50		Dom. Bridge ..	1031	72	73	71½	73
13	9	1.00++1.50		Dom. Coal. pf.	250	9	9	9	9
23½	11½	.80	6.2	Dom. Corset ..	255	13	13¼	13	13
5	4	•	....	Dom. Dairies ..	800	4½	4½	4½	4½
16	10	•	....	Do. pref.	28	13½	14	13	14
26½	20½	.60++1.40		Dom. Engineer	675	21¾	22	21¾	21¾
15¾	12¾	†.45	....	Dom. Foundry	2515	14¼	14¼	13¾	14
100	96½	4.50	4.5	Do. 4½% pref.	30	99	100	98¾	100
69¼	57	2.80++1.25		Dom. Glass ..	90	60	62	62	62
31	30	1.40	4.6	Do. pref.	1065	30¾	30¾	30¼	30½
16	12	-	....	Dom. Magnes..	935	12½	12¼	12¼	12¼
35½	30	1.60++1.20		Dom. Oilcloth..	75	31	30½	30¼	30½
24	20	1.20	....	Dom. Scot. Inv.	25	24¼	24	24	24
47½	43	2.50	5.8	Do. pref.	687	44	44	43	43
6	4	-	....	Dom. Square ..	10	6½	6½	6½	6½
16¼	11½	1.00	8.3	Dom. St. & C..	3281	12¾	12¾	12	12¾
11¾	10¼	1.00	9.1	Dom. Stores ..	795	16	16	15¼	16
9	8	.10	....	Dom. Tar & Ch	1791	8½	8½	8	8
20¾	19½	1.00	5.2	Do. pr.f.	1250	19½	19½	19½	19½
11	8½	.45	....	Dom. Textile ..	2850	9¼	9¼	8¾	9
4	2½	•	....	Donnell & T M A	30	2½	2½	2½	2½
14	12½	1.20	....	Do. 2nd pref.	200	14	14½	13½	13½
16¾	12	.60	....	Dow Brew.	1080	16	16	16	16
7.00	4.85	•	....	East Koot. Pr.	25	5	5	5	5
54	51	-	....	East Steel	525	52	52	51	52
62	42	.20+†.30		Easy Washing..	1100	51	51	51	51
27½	25	†.50+	.50	Economic Inv..	635	27	27	27	26½
23½	20½	1.00	4.8	Eddy Paper A..	633	22	22	22	22
10½	9	†.07½	....	Electrolux	400	10¼	10¼	10¼	10¼
20	17½	.60	3.3	Empire Life ..	44	17½	20	18	18
8½	6	.40	5.0	Enam. & Heat..	20	6½	8	8	8
20½	18	1.04	5.5	Estabrooks pf..	150	19	19	19	19
21½	18½	1.40+$.35		Famous Players	1695	20¼	20¾	20¼	20¼
25	21	a1.50	....	Fanny Farmer..	75	23	21½	21	21½
17	14	-	....	Federal Grain..	625	15¼	15¾	15	15¼
13	11½	.80	6.7	Fisher B. A....	100	12	12	12	12
2	1	-	....	Fittings	25	9½	9	9	9
12	10	.60	6.0	Do. (A)	200	10	10	10	10
9.25	7.75	-	....	Fleet Mfg.	8310	1.00	1.00	.75	1.00
68	58½	2.00+$1.00		Ford Motor A.	3149	60¼	60¼	58½	59½
33	23	-	....	For. Pr. Secs. p	100	28½	28	28	28
24½	21	.60	5.1	Foundation Co.	725	12	12	11	11½
18	13½	1.00	7.0	Fraser Cos.	910	14¼	14¾	14	14½
18¼	13¼	.80++		Do. (A)	1405	21¾	22	21¼	21½
16¾	12¼	1.00	7.8	Cockshutt Farm	4815	13	13	12¾	12¾
80	72	-	....	Comb. Enter. p	13	75	75	75	75
32	31	-	....	Comm. Alcohol	600	31	31	31	3
55	50½	-	....	Conf. Life	10	52½	55	55	55
9¼	7	†.50	....	Cons. Bakeries	225	7¼	8	7	8
1.15	1.00	-	....	Cons Div Sec A	95	1	1	1	1
27	25	1.50	7.0	Do. pref.	25	25	25	25	25
38½	34¼	1.50++1.75		Cons. Paper ..	5752	36	36½	35	35½
8	5½	†.12½	....	Cons. Press A..	540	8	8	8	8
31	2	-	....	Do. (B)	100	3.50	3.25	3.50	3.25
24½	24½	†.50+.55		Cons. Smelters	10172	26	26½	24½	26
20	19½	1.00	5.0	Cons. Text. pf.	30	20	20	20	20
16½	14	.80	5.1	Consumers Gas	1153	15¾	15¾	15¾	15¾
24¾	21½	1.50	6.3	Consum. Glass.	335	24½	24	23	24
10½	8	†.70	....	Corbys A	1240	8½	8½	8	8½
10	8	†.70	....	Do. (B)	50	8½	8	8	8
98	95	5.00	5.3	C. P. Box 5%pf	5	96	95	95	95
37½	35	2.00	5.7	Crown Cork	30	35	35	35	35
115	110	5.00	4.5	Crown Trust ..	8	110	112	112	112
7¾	6¾	4.00	5.9	Crow's N. Coal	25	69	68	68	68
42	38	-	....	David & Fre. A	30	40½	40½	40½	40½
98	90	†1.50	....	Do. (B)	190	97	90	72	90
14¾	11½	1.50	11.1	Davis Leath. A.	250	13¾	13½	13¼	13½
44	42	•	....	Do. (B)	60	41	41	41	41
85	75	$1.00	....	De Havilland A	10	80	76	76	76
28	24½	1.20+$.50		Distil-Seag. ..	6177	26	26½	25¾	26½
30¼	27½	1.20	4.0	Dom. Bank	362	30	30	29¾	30
85	71½	1.60++1.50		Dom. Bridge ..	1031	72	73	71½	73
13	9	1.00++1.50		Dom. Coal. pf.	250	9	9	9	9
23½	11½	.80	6.2	Dom. Corset ..	255	13	13¼	13	13
5	4	•	....	Dom. Dairies ..	800	4½	4½	4½	4½
16	10	•	....	Do. pref.	28	13½	14	13	14
26½	20½	.60++1.40		Dom. Engineer	675	21¾	22	21¾	21¾
15¾	12¾	†.45	....	Dom. Foundry	2515	14¼	14¼	13¾	14
100	96½	4.50	4.5	Do. 4½% pref.	30	99	100	98¾	100
69¼	57	2.80++1.25		Dom. Glass ..	90	60	62	62	62
31	30	1.40	4.6	Do. pref.	1065	30¾	30¾	30¼	30½
16	12	-	....	Dom. Magnes..	935	12½	12¼	12¼	12¼
35½	30	1.60++1.20		Dom. Oilcloth..	75	31	30½	30¼	30½
24	20	1.20	....	Dom. Scot. Inv.	25	24¼	24	24	24
47½	43	2.50	5.8	Do. pref.	687	44	44	43	43
6	4	-	....	Dom. Square ..	10	6½	6½	6½	6½
16¼	11½	1.00	8.3	Dom. St. & C..	3281	12¾	12¾	12	12¾
11¾	10¼	1.00	9.1	Dom. Stores ..	795	16	16	15¼	16
9	8	.10	....	Dom. Tar & Ch	1791	8½	8½	8	8
20¾	19½	1.00	5.2	Do. pr.f.	1250	19½	19½	19½	19½
11	8½	.45	....	Dom. Textile ..	2850	9¼	9¼	8¾	9
4	2½	•	....	Donnell & T M A	30	2½	2½	2½	2½
14	12½	1.20	....	Do. 2nd pref.	200	14	14½	13½	13½
16¾	12	.60	....	Dow Brew.	1080	16	16	16	16
7.00	4.85	•	....	East Koot. Pr.	25	5	5	5	5
54	51	-	....	East Steel	525	52	52	51	52
62	42	.20+†.30		Easy Washing..	1100	51	51	51	51
27½	25	†.50+	.50	Economic Inv..	635	27	27	27	26½
23½	20½	1.00	4.8	Eddy Paper A..	633	22	22	22	22
10½	9	†.07½	....	Electrolux	400	10¼	10¼	10¼	10¼
20	17½	.60	3.3	Empire Life ..	44	17½	20	18	18
8½	6	.40	5.0	Enam. & Heat..	20	6½	8	8	8
20½	18	1.04	5.5	Estabrooks pf..	150	19	19	19	19
21½	18½	1.40+$.35		Famous Players	1695	20¼	20¾	20¼	20¼
25	21	a1.50	....	Fanny Farmer..	75	23	21½	21	21½
17	14	-	....	Federal Grain..	625	15¼	15¾	15	15¼
13	11½	.80	6.7	Fisher B. A....	100	12	12	12	12
2	1	-	....	Fittings	25	9½	9	9	9
12	10	.60	6.0	Do. (A)	200	10	10	10	10
9.25	7.75	-	....	Fleet Mfg.	8310	1.00	1.00	.75	1.00
68	58½	2.00+$1.00		Ford Motor A.	3149	60¼	60¼	58½	59½
33	23	-	....	For. Pr. Secs. p	100	28½	28	28	28
24½	21	.60	5.1	Foundation Co.	725	12	12	11	11½
18	13½	1.00	7.0	Fraser Cos.	910	14¼	14¾	14	14½
18¼	13¼	.80++		Do. (A)	1405	21¾	22	21¼	21½
16¾	12¼	1.00	7.8	Cockshutt Farm	4815	13	13	12¾	12¾
80	72	-	....	Comb. Enter. p	13	75	75	75	75
32	31	-	....	Comm. Alcohol	600	31	31	31	3
55	50½	-	....	Conf. Life	10	52½	55	55	55
9¼	7	†.50	....	Cons. Bakeries	225	7¼	8	7	8
1.15	1.00	-	....	Cons Div Sec A	95	1	1	1	1
27	25	1.50	7.0	Do. pref.	25	25	25	25	25
38½	34¼	1.50++1.75		Cons. Paper ..	5752	36	36½	35	35½
8	5½	†.12½	....	Cons. Press A..	540	8	8	8	8
31	2	-	....	Do. (B)	100	3.50	3.25	3.50	3.25
24½	24½	†.50+.55		Cons. Smelters	10172	26	26½	24½	26

Range 1953 High	Low	Div. Rate $	Yld %	Company	Sales	Last June 12	Week end. June 19 H	L	Close
34½	26½	1.25	....	Int. Metal Ind..	175	27	27	27	27
97½	94	4.50	4.6	Do. pref.	60	97	97½	97	97½
40½	39½	e2.00	....	Inter. Nickel ..	15477	39½	40	39½	40
131	127	e7.00	....	Do. pref.	60	129	130	128	130
55½	47½	e3.00	....	Int. Paper	2375	49½	49	47½	49
39	32½	e1.00	....	Int. Pete.	2314	23½	24	22½	24
71	62	2.40	3.5	Int. Power	480	62	69½	64	69½
29½	24½	e1.05	....	Int. Util.	847	25½	26	25	25½
32½	29½	e1.40	....	Do. pref.	110	29½	29½	29½	29½
29½	19½	e.15	....	Interp. Pipe ..	26500	20½	21¼	19½	20½
4.95	3.80	-	....	Interp. Util. ..	500	4	4	4	4
28	25	1.50	6.0	Inv Foundation	20	25	25	25	25
32½	30	3.00	9.9	Do. pref.	127	32	31	30½	30½
15	12½	1.00	7.1	Jam. Pub. Ser..	600	13½	14	14	14
12½	10½	.80	6.7	Jour. Pub. Ot..	600	12	12	12	12
17½	15	1.00	6.1	Kelvinator	200	17	17	16¾	16¾
18	17	1.00	5.6	Labatt, John ..	200	17½	18	17	18
33½	29½	1.60	5.4	Lake of Woods	25	29½	29½	29½	29½
10	7½	•	....	Lang, J. A. ..

Unlisted Stocks

(Compiled from quotations by Kippen & Co., Montreal and Intercity Securities Ltd., Toronto)

June 22, 1953

	Bid	Ask
Algoma Cent. & H. B. Ry.	14.00	15.00
Do. pref.	1.50	....
Allens Toronto Units	43.00	....
Anglo American Explor'n	20.00	22.50
Ang. Can. Telephone 'A' ..	10.25	10.75
Ash Temple Ltd.	1.80	1.90
Do 5% pfd	87.00	92.00
Beauharnois L. H. & Pwr.	31.00	31.25
Bowes Ltd. 1% pfd.	.70	.80
British Peterboro Carpet .	56.00	61.00
British Mtge. & Trust	205.00	220.00
B. C. Sugar	92.00	95.00
Brockville Trust & Savings	62.50	....
Can. Crushed Stone 6% pfd.	86.00	90.00
Can. Southern Rly.	30.00	31.50
Can. Consol. Grain units ..	80.00	....
Can. Foreign Secs.	7.25	....
Can. Gen. Sec. pfd.	.80	....
Can. Motor Lamp com.	18.00	19.50
Can. Superior Oils	8.00	8.50
Can. West Nat. Gas com.	16.50	17.75
Capital Wire Cloth com.	22.00	24.00
Carlton Club	82.50	....
Chase, A. W. Units	49.50	52.00
Coleman Collieries A	.20	.30
Do. B	.15	.20
Colonial Steamships com. .	210.00	225.00
Commercial Finance Corp.	32.50	35.00
Commercial Life 10% paid	10.50	11.50
Consumers' Bldg. V.T.	14.00	....
Continental Life Ins.	86.00	90.00
Coulsville A	17.25	18.00
Do. B	10.25	12.00
Do. pfd.	.75	.85
Crain, R. L. pfd.	.75	.95
Cuban Cat. Sugar	5.00	....
Debentures & Secs. 5% pfd.	81.00	86.00
Delhi Oil	33.50	36.50
Dennisteel Corp.	1.75	....
Do. 7% pfd.	4.50	....
Detroit Internat. Bridge ...	28.25	29.25
Dom. Gen. Gen. Ins.	200.00	....
Dom. Manufacturers pfd. ..	92.00	....
Do. com	1.25	....
Dom. Royalty Corp.	.25	.35
Dover Industries Ltd.	8.25	8.75
Dupuis Freres pfd.	14.25	16.50
Essex Packers com.	1.50	....
Do. pfd.	28.00	....
Fibre Products 2nd pfd. ..	....	.40
Foreign Power pfd.	27.00	29.00
Galt Brass com.	38.50	....
Goderich Elevator & Trans.	20.50	22.00
Granite Club	13.00	14.00
Gt. Britain & Can. Inv.	2.40	....
Do. pfd.	92.00	....
Gt. Lakes Power 5% pfd. .	22.50	23.50
Great-West Life	74.50	75.50
Guardian Realty pfd.	94.00	....
Guaranty Co. of N. Amer.	375.00	....
Hart Battery com.	8.00	10.00
Heaps Neroutos com.	2.25	2.75
Highland Dairy 5% pfd. ..	....	54.00
Homewood Sanitarium	94.00	98.00
Hudson's Bay Co.	11.75	12.25
Industrial Mtge. & Trust ..	67.00	....
Ingram & Bell pfd.	102.00	....
Internat. Holdings com. ...	12.00	13.75
Ladies Golf & Tennis	15.00	....
Lambton Golf	148.00	....
Lambton Loan Barrie ...	71.00	78.00
Laprairie Co. com.	12.50	15.00
Do. pfd.	86.00	100.00
Lond. Can. Inv. 6% pfd.	42.00	46.00
Do. A	32.00	36.00
Manufacturers Life Ins. new	60.00	....
Maritime T. & T.	15.00	16.00
Medical Arts Bldg., Toronto	41.50	42.50
Mex. Elect. Co. 1st pfd. ...	....	7.25
Mississauga Golf	15.00	20.00
Monarch Life 40% pd.	148.00	150.00
National Life 25% paid ...	64.00	....
New Brunswick Tel.	11.50	12.00
Niagara Lower Arch Bridge	48.00	....
S. Nord Chemical	.75	....
Northern Tel.	1.45	1.60
Nova Scotia Li. & Pwr. ...	19.50	20.50
Oakville Wood 6% pfd.	82.00	86.00
Ont. & Que. Rly. 5% c. stks.	114.00	122.00
Pern, Oshawa Theatres com.	12.50	....
Park Lawn Cemetery	1.35	1.70
Pelier Brewing com.	2.00	2.30
Do. pfd.	13.50	14.00
Ponder Oil warr.	.32	.45
Provincial Bank of Can. ..	14.75	15.50
Provincial Gas Co.	68.00	....
Prudential Trust Co.	15.00	18.00
Reliance Pet. A & B	19.50	....
Ritchie Cut Stone pfd.	8.50	....
P. L. Robertson Mfg. old .	57.00	59.50
Robin Jones Whitman	1.25	....
Do. pfd.	33.00	40.00
Sawyer Massey com.	3.25	....
Scarboro Golf	11.00	....
Sec. Stand Royalties pfd. .	.05½	.07
Sincennes McNaught Lines	2.50	3.00
Sherbrooke Trust Co.	140.00	....
Skyway Drive-In Theatres	1.00	1.40
South Winnipeg Ltd.	2.00	....
Sovereign Life 25% paid .	65.50	....
Standard Fuel pfd. 4½% ..	35.00	38.50
Do. com.	3.00	4.25
Stanfields Ltd. A	10.00	11.00
Do. B	9.00	....
Strategic Materials	6.75	7.50
Summit Golf	14.00	....
Sun Life Assce.	163.00	167.00
Toronto Brick 1st pfd.	7.50	....
Do. com.	6.50	8.00
Toronto Housing com.	5.35	....
Toronto & Lond. Invest. ..	2.15	2.45
United Amusement A	11.25	....
Do. B	7.25	....
United Co-Op's Ont. pfd. ..	3.00	....
United Farmers Co-op.	3.00	....
United Steel pfd.	25.25	26.25
Universal Cooler com.	1.85	2.00
Do. 6% pfd.	85.00	90.00
Waterloo Manufacturing ..	4.75	7.50
Western Assurance com. ...	92.00	....
York Downs Golf free tr.	250.00	285.00

Significant Investors' Index Numbers

No. of Securities	Mach. and equip. 11	Pulp and paper 10	Mill-ing 4	Oils 5	Textiles and cloth-ing 10	Food and allied prod. 14	Bever-ages 10	Bldg. mater. 16	Power and trac-tion 11	Banks 8	Total utili-ties 15	Total co's 108
1953 to date:												
High	474.1	513.5	155.2	178.6	410.5	136.5	479.9	312.5	150.9	167.4	176.9	186.2
Low	452.7	511.6	151.3	161.2	78.4	79.5	79.3	66.7	60.2	60.0	62.5	61.1
1952												
Monthly Figures:												
Jan.	432.9	502.5	152.6	147.3	279.0	115.2	382.5	293.6	146.3	162.0	167.9	172.5
Feb.	418.9	494.4	153.4	143.0	269.4	117.5	377.0	291.6	146.2	164.8	166.0	169.0
Mar.	415.5	501.9	150.6	145.3	281.5	117.8	386.8	293.3	147.0	165.9	167.7	170.0
Apr.	423.7	473.5	150.4	136.8	247.7	118.3	394.4	282.2	144.0	163.0	161.6	160.8
1953												
Weekly Figures:												
May 7	377.5	473.0	128.3	132.9	244.8	118.1	397.2	277.1	147.3	164.2	162.1	160.0
May 14	374.8	468.4	128.3	134.2	237.6	117.9	429.0	273.4	142.3	167.4	159.1	159.0
May 21	388.9	473.6	128.1	136.5	230.6	118.4	397.9	273.9	141.3	166.8	161.1	161.2
May 28	394.8	486.9	128.4	133.6	227.4	118.5	396.5	276.0	142.7	166.6	159.2	159.1
June 4	372.8	467.5	127.9	129.7	223.3	118.6	389.2	275.9	142.1	165.7	158.0	156.4
June 11	377.5	464.8	127.9	126.3	223.9	161.3	383.5	269.1	142.0	169.4	157.7	155.9

*High and low for year from 1935 to date inclusive are based on weekly figures issued by the Dominion Bureau of Statistics.

Toronto Stock Exchange Index

	20 Indus.	20 Golds	15 B.M.	15 W.O.
June 22	300.33	76.91	153.08	108.03
June 20	....	....	....	....
June 19	299.55	76.75	151.70	107.30
June 18	299.18	76.25	151.87	107.76
June 17	298.51	75.80	149.90	106.85
June 16	297.64	75.53	148.99	104.90
Month Ago	309.90	79.01	157.75	116.58
Year Ago	316.09	88.77	182.01	136.87
1953 High	326.51	87.01	185.69	138.31
1953 Low	296.79	74.74	148.29	104.47

Montreal Stock Exchange Index

	10 Util.	20 Ind.	30 Com.	10 Pprs.	15 Gold
June 22	93.6	183.6	153.9	662.74	56.31
June 20	....	....	....	....	....
June 19	93.7	182.7	153.6	659.62	55.73
June 18	93.6	182.4	152.8	659.86	55.59
June 17	93.3	180.8	151.7	653.12	55.63
June 16	93.3	181.1	151.8	650.63	56.40
Month Ago	93.5	186.8	156.7	675.27	60.45
Year Ago	85.1	202.2	163.2	722.94	65.14
1953 High	96.6	212.5	173.0	719.60	66.32
1953 Low	91.5	180.8	151.7	639.76	55.59

Dow Jones Closing Stock Averages

	30 Indus.	20 Rails	15 Util.	65 Stocks
June 23	287.26	104.19	47.87	104.53
June 20	....	....	....	....
June 19	285.80	103.18	47.88	103.83
June 18	285.96	102.85	47.92	103.78
June 17	285.74	102.49	48.06	103.77

	30 Indus.	20 Rails	15 Util.	65 Stocks
June 16	282.88	100.48	47.88	102.49
Month Ago	277.47	106.73	51.00	109.22
Year Ago	269.50	100.35	49.70	104.45
1953 High	293.79	112.31	53.88	113.96
1953 Low	262.86	89.50	47.87	102.49

Corporation Bonds

(Supplied by Investment Dealers' Association of Canada)
June 22, 1953

Public Utility Issues:	Int. Rate %	Due	Bid	Ask	Bid	Prev. Week Ask
Alg. Cen. H.E.R.	5	'59	131	135	132	
Bell Tele.	3	'77	81	84	81	
Do.	4½	'67	100	103	100	
Braz. Traction	4½	'70	94	97	94	
B. C. Electric	3½	'67	86	89	86	
Do.	3½	'75	83½	86½	84	
Do.	3½	'69	88	91	88	
Do.	4½	'77	97	100	97	
B. C. Tele.	4	'62	97½	100½	97½	
East Kootenay	3½	'67	82	....	82	
Gat. Power D	3½	'70	88	....	88	
Gt. Lakes Pwr.	4½	'69	93	96	93	
Maclaren-Quebec Power	3	'69	84	87	84	
Mex. Lt. & Pr.	5	'73	89	92	89	
Mtl. Trams. B	5	'55	99½	102½	99½	
Nat. Lt. & Pwr.	4½	'61	94	97	94	
North. Que. Pr.	4½	'67	92½	95½	92½	
Power Corp.	3½	'67	87	90	87	
Quebec Power	3	'62	90	93	90	
St. Maurice Pr.	3½	'70	87	90	87	
Shaw. W. & Pr.	5	'71	85	88	85	
Do.	3½	'73	88	91	88	
Un. Fuel Invest.	4	'69	96	99	96	
Wpg. Electric	3½	'71	91½	94½	91½	
Industrial Issues:						
Abitibi Pr. P.	3½	'67	94	97	94	
Acadia-Atlantic Sugar	3½	'65	88½	91½	88½	
Alaska P. & C.	4½	'66	94	97	94	
Aluminum Co.	3½	'74	91	94	91	
Barvue Mines	5c	'56	93½	96½	94	
Bowater's Nfld. P. & P.	3½	'68	87	90	87	
B. C. For. Pr.	4½	'66	95	98	94½	
Burns & Co.	4	'63	94	97	94	
Can. Steamship	4½	'66	96	99	95	
Can. Bread	4½	'67	90	93	90	
Can. Brew.	4½	'69	91½	94½	91½	
Can. Canners	3½	'70	88	92	89	
Can. Celanese	3	'62	90	93	90	
Can. Chemical	3½	'71	95½	98½	95½	
Can. Oil	3½	'62	91	94	92	
*Do.	5	'72	99½	102½	99½	
Can. West. Lum.	4	'62	90	93	90	
Cockshutt Plow	4½	'69	96	99	96	
Columbia Cell.	5	'68	97½	100½	97½	
Consol. Paper	3½	'67	87½	100½	97	
Dom. Stores	5	'72	98½	101½	98½	
Dom. Tar & Ch.	5	'67	97	100	97	
Dom. Woollens	5	'64	60	65	60	
Dryden Paper	5½	'68	97	100	97	
E. B. Eddy	4½	'69	98½	101½	98½	
Elk Falls Co.	5	'75	94½	97½	95½	
Fed. Grain	4	'64	92½	95½	92½	
Gen. Su. Wares	3½	'70	88	91	88	
Gt. Lakes Pap.	3½	'67	93	96	93	
Gt. Plains Dev.	4½	'65	98	101	98	
Husky Oil	5½	'62	99	102	99	
Imp. Tobacco	3	'70	85	88	85	
Imp. Oil	3	'69	85½	88½	85½	
Indust. Accept.	5	'70	95	98	95	
Irving Oil Co.	5½	'67	97½	100½	97½	
Maple L. M.	4½	'68	93	96	93	
Massey-Harris	3	'67	93½	104½	93½	
McColl-Front.	3	'71	83	86	82	
Mercury Mills	4	'63	94	97	94	
Mon. Knit.	4½	'71	88	91	88	
N. S. Steel Coal	3½	'63	92	95	92	
Page-Hersey T.	5½	'65	90	93	90	
Price Bros.	5½	'61	94	97	94	
St. Law. Corp.	6	'72	96½	99½	96½	
Silverwood Dair.	4	60-64	90	93	90	
Do.	4	'71	88	91	88	
Simpsons Ltd.	4½	'73	99	102	99	
Simpsons-Sears	4½	'72	99	102	99½	
Steel Co. of Can.	3½	'67	96	99	96	
Traders Finance A	4½	'69	97	100	97	
United Corp.	4	'58	96	99	96	
United Steel	4	'60	91	94	91	
Un. Grain Gr.	3½	'70	84	88	84	

Commodities

	Latest week	Previous week	Same week last yr.
Cattle	$20.33	$20.66	$25.50
Hogs	25.60	25.60	25.60
Copper, lb.	29¾	29¾	24½
Sugar, raw, lb.	.0589	.0590	.0605
Coffee, lb.	56¼	55¾	52¾
Hides	19	19¼	16
Weekly Indices			
U. S. Labor	109.6	*109.7	111.7
Dow Jones	287.93	161.10	176.04
Monthly Indices			
Retail (May)†	124.4	114.6	115.9
W'sale (Apr.)	219.6	221.9	236.9
U. S. (Feb.)*	109.6	109.9	112.6
Gt. Brit. (Mar.)	325.5	324.1*	287.0

Note: †Cost-of-Living Index revised to the Base of 1949=100.
*New series based on 1947-49=100.
Base of price of quotations is as follows: Cattle—Steers, good up to 1,000 lb. top price. Toronto. Copper-electrotype, New York. Coffee No. 4 Santos. Spot Raw Sugar 96 degrees centrifugal c.i.f. *Revised.

Investment Trusts

	Divd. pd.* cents	Bid $	Ask $
Affiliated Funds	....	4.87	5.05
Balanced Funds	16(50)	3.81	4.19
Canadiana Fund	.60(1.10)	22.45	23.40
Can. Invest. Fund	23(23)	5.94	6.53
Com'wealth Int.	.17(25)	4.83	5.31
Corporate Inv.	13(26)	5.35	5.81
Div'sified Inc. shs. B.	.05(05)	2.35	2.55
Dom. Equity Inv.	.15(15)	10.10	10.53
Grouped Inc.	9.7(?)	4.80	4.93
Intl. American	....	10.48	11.82
Investors Mut.	7(28.5)	6.81	6.71
Leverage Fund	.13(17)	3.47	3.81
Mut. Accum. F.	19.30(71.95)	13.95	14.98
Mutual Income	8.45(13.25)	3.25	3.56
Resources of C.	11.(12)	6.06	6.56
Timed Interest	.10(20)	14.30	*4.30
Trans-Can. A	41.4(87.8)	17.50	....
Do. B	36.6(66.4)	17.65	....
Do. C	7.8(20)	3.65	3.95

†Less or (*) plus stock exchange commission.
*Paid or payable in 1953; total paid in 1952 in brackets.
‡After 4-for-1 stock split.

CONVERTIBLE ISSUES

Abitibi Pr. & P. 4½	'61	97½	100½	97½
Ajax Petrs. Ltd.	'62	96	99	96
Atlas Steels	'67	99	103	99
Braz. Traction	4½	'71	93	96	94
B. A. Oil	3½	'61	98	101	99
Do.	3½	'62	94	97	94
B. C. For. Pr.	5	'58	93	96	93
Can. So. Oils	5	'61	91	95	91
Can. Brew	4½	'61	97	100	97
C.P.R.	3½	'60	92	95	91½
Do.	4	'69	97½	100½	97
Central Leduc	5	'63	90	93	90
Cockshutt Farm	4	'68	96½	99½	96
Dom. Magnes	5	'62	107	112	107
Dom. Steel & C.	4	'61	91½	94½	91½
Dom. Textile	4	'66	92	95	92
Gen. Pete.	4½	'65	97	102	97
Jupiter Oils	5	'67	92	95	92
Kroy Oils	5	'67	93	97	93
N. Sup. Oils	5	'64	94	97	94
Pathfinder Pet.	1-5	'62	100	105	103
Power Corp.	4½	'62	105	110	104
Scurry Oils	5	'64	92	96	93
Silverwood Dair.	5½	'72	100½	103½	100
Supertest Pete.	4	'70	98	98	94
Traders Fin.	4	'62	172	180	172
Trans Empire	5	'64	96	98	96
Do.	5½	'67	98	102	99
Triad Oil	4½	'67	97	102	97
West. C. Brew.	5	'67	97	101	98

Oil Stocks (continued)

3.35	2.90	....	....	Merrill	3,120	2.20	3.20	2.95	2.97
.38	.30	....	....	Mic Mac	4,700	.24½	.33	.30	.33
.38	.38	....	....	Midcont	8,000	.20	.22	.18	.19
.65	.53	....	....	Mill City	6,800	.30	.35	.30	.33
.77	.52	....	....	Mit Mac	2,700	.35	.34	.32	.32
1.31	.90	....	....	Model	900	.65	.66	.60	.65
1.35	.58	....	....	Montsoo	2,400	.65	.65	.58	.65
.77	.40	....	....	Naco	2,000	.45	.50	.40	.36
2.00	1.60	....	....	Nat. Pet.	4,100	1.95	2.00	1.85	1.85
3.00	2.00	....	....	N. British	5,901	2.26	2.30	2.15	2.30
2.25	1.53	....	....	N. Concord	12,550	.75	1.80	1.80	1.80
1.53	.91	....	....	N. Cont.	68,600	1.07	1.09	1.05	.45
.34	.20½	....	....	N. Davies	1,000	.25	.29½	.20½	.45
.70	.28	....	....	N. Devon	14,800	.32	.36	.29	.34
.11	.07	....	....	N. Pacalta	10,000	.07½	.07	.07	.07½
.17½	.09	....	....	New Ranch	54,600	.10	.10	.09	.09
.35	.12	....	....	N. Richfield	1,775	.15	.15½	.14	.15½
4.10	2.60	....	....	N. Superior	7,945	2.70	2.85	2.70	2.90
3.05	1.75	....	....	North Can.	1,900	2.40	2.50	2.10	2.30
.11	.06½	....	....	N. Cont.	7,000	.06	.06½	.06½	.06½
1.09	.38	....	....	Northland	3,500	.34	.52	.45	.50
.11	.07½	....	....	Oil Select	10,000	.06½	.06½	.07½	.07½
3.05	2.35	....	....	Okalta	9,189	2.25	2.42	2.00	2.03
13.37½	9.25	....	....	Pac. Pete.	5,053	10.25	10.35	9.50	10.00
.84	.30	....	....	Pan West	14,800	.32	.34	.30	.34
8.75	6.30	....	....	Peace River	2,130	7.50	7.50	7.10	7.25
3.50	2.60	....	....	Peruvian	17,120	3.00	3.00	2.75	2.85
.55	.40	....	....	Petrol O.	11,800	.44	.48	.40	.48
2.35	1.40	....	....	Phillips Oil	700	1.80	1.80	1.80	1.80
1.70	2.14	....	....	Pioneer	10,700	1.30	1.30	1.14	1.29
2.10	2.01	....	....	Pontiac	68,300	1.90	2.10	2.01	2.10
1.30	.76	....	....	Poplar	4,000	.75	.80	.80	.80
2.35	2.05	....	....	Prairie	800	2.85	2.85	2.05	2.05
1.68	.90	....	....	Que Oil Dev	400	1.20	1.25	1.24	1.24
.42	.29	....	....	Quinalta	600	.35	.34	.34	.34
.20½	.08	....	....	Realty	4,000	.07½	.07	.06	.07½
1.70	1.15	....	....	Red. Utd.	11,200	1.30	1.35	1.31	1.35
.33	.15	....	....	Reef Pet.	2,300	.18	.17	.16	.16
.27½	.12	....	....	Renfrew	5,300	.14	.13½	.12	.13
1.15	.60	....	....	Rio Prado	14,216	.71	.78	.66	.75
.37	.15	....	....	Rouzan	5,500	.18	.20	.16	.16
17.37½	12.50	.36	1.9	Royalite	3,329	13.25	14.25	12.50	14.00
.37	.14	....	....	Sapphire	8,730	2.38	2.45	2.04	2.31
2.49½	.16	....	....	Scurry Oils	31,750	1.72	1.78	1.40	1.72
2.80	1.80	....	....	Security	7,100	1.88	2.00	1.80	1.80
.37	.00½	....	....	Sel'n War.	117,850	.01	.03	.00½	.01½
.24	.15	....	....	Select Oils	2,000	.19	.17½	.17½	.17½
.13	.09	....	....	Share Oils	5,000	.10½	.10	.09	.10
1.15	.80	....	....	Sioux Val.	1,000	.80	.63	.62	.62
.45	.30	....	....	S. W. Pete.	3,375	.40	.40	.40	.40
.45	.25	....	....	Spooner	7,350	.28	.30	.25	.27
.36	.13	....	....	Spr. C'lec	15,400	.15	.15	.13	.15
1.85	1.13	....	....	Stanwell	136,900	1.83	1.83	1.70	1.50
.41	.22	....	....	Sturgeon	1,000	.25	.22	.22	.22
.45	.28	....	....	Sunset	800	.30	.30	.30	.30
.90	.60	....	....	Sweet Gr.	295,000	.45	.45	.51	.40
.65	.35	....	....	Tor. Amer.	21,000	.41½	.42	.30	.41
4.10	2.77	5.05	....	Trans Exp	3,133	2.90	2.90	2.77	2.85
1.55	.74	....	....	Trans-Era	84,800	.84	1.04	.74	1.04
.19	.08	....	....	Transfield	5,500	.08	.10	.08½	.08½
.38	.24	....	....	Trend	2,500	.25	.28	.25	.28
2.81	2.00	....	....	Triad	47,400	2.40	2.55	2.30	2.50
1.70	.99	....	....	Tri-Tor	88,450	1.15	1.23	1.05	.99
1.80	.90	....	....	United Oils	30,000	1.00	1.05	.90	.96
.32	.15	....	....	Van Tor	40,100	.25	.24	.21	.21
.95	.35	....	....	Yukon	200	.45	.42	.42	.42
.20	.06½	....	....	Warner	12,500	.10	.10	.09½	.10
1.00	.75	....	....	W'Burgess	5,730	.75	.75	.75	.75
2.10	1.85	....	....	W. Tor'nto	1,000	2.00	2.00	1.90	1.90
.35	.24	....	....	W. Ashley	6,175	.20	.20	.19	.20
.23½	.17	....	....	W. H'Stead	36,100	1.25	1.25	1.05	1.20
1.08	1.05	....	....	W. L'Holds	5,025	5.45	5.45	5.00	5.40
1.15	.85	....	....	Wiltcik	87,710	.61½	.61	.55	.58
.25	.12	....	....	Y'lo Cas.	5,500	.12	.13	.12	.12
1.10	.75	....	....	Y'lo Prin.	9,000	.80	.75	.70	.75
.60	.25	....	....	York Oils	14,400	.45	.43	.36	.37

* U. S. Funds. ‡ Paid in 1953. § Div. Deferred. — † Paid or payable in 1953.

Market Comment

What stocks and bonds are doing and what prominent observers say

A moderate recovery in prices on Canadian stock markets during the week has been accompanied generally by diminishing volume of trading. With lead and zinc prices continuing firm and resisting any further decline, base metal stocks as well as uraniums improved noticeably. Anacon, Preston East Dome and Ontario Pyrites were among the listed issues which showed good gains, while Peach Uranium continued to push into new high ground in over-the-counter trading.

There was no marked rally among western oil stocks following the unexpected 25c bbl. rise in the U. S. price of crude oil—the first increase since 1947—although the TSE index recovered most of the previous week's loss. Gold and paper issues remained in a narrow trading range, with advances outnumbering declines.

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McCUAIG BROS., & CO. (Montreal)

One of the basic factors which the market is constantly trying to value is business profits. For some time there have been indications of a squeeze on business profits, among them the drop in most commodity prices, and, at the same time, the steady upward pressure of wages and other costs of doing business. A few days ago R. M. Fowler, president of the Canadian Pulp & Paper Association, speaking of the industry, said: "The problems mainly seem to be those arising from high costs . . . it was inevitable that costs should rise steadily during a long period of inflation . . . but the result has been to raise the break-even point for each company to the highest level it has ever experienced. This means that even relatively small reductions in demand . . . can cut deeply into net profits."

In his mid-June address to the Canadian appliance industry, the president of Thor Canadian Co. stated: "Rising costs and keener competition are applying a squeeze to profits."

Narrowing profit margins and the demonstrated effect of even a small drop in gross earnings on net profits (as revealed in certain recently issued quarterly reports) have probably had a lot to do with the recent market decline. Any easing in world tension — even a truce in Korea — would certainly accentuate this trend.

Up to now some industries have been able to offset lower profit margins with a higher volume of goods sold. However, tightening money markets, which have brought about falling bond prices, and the rapid increase in consumer debt have exerted a depressing influence on investor psychology.

While the trend of stock prices has been downward since January, important recoveries are normal after persistent declines. From a January high point of 212.5 the Montreal industrial average fell to 180.8 during June.

It is also worth remembering that a number of stock groups have been declining for a year and a half, and many stocks have already dropped up to 40% or 50% from their highs.

With seasonal tendencies up in July and August, we believe that there are opportunities in selected producing western oils and in certain well-deflated growth stocks which have shown strong resistance to the general market downtrend.

• • •

BARRON'S; The Trader (New York)

Aside from the fear always generated by a falling stock market, the only tangible adverse development was the break in wheat price futures on Monday (June 15) of the full 10-cent limit, the largest spill in over three years. But next day, following word that the government planned emergency loans on wheat stored on the ground in certain sections of the Southwest, wheat rallied back the full 10-cent limit. As for business, the news continued to run contrary to the dogmatic predictions of an early letdown in activity. Notable was the 11% jump in operations of the barometric paperboard industry to 98%, the highest in seven months.

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New Highs and Lows

During the week ended June 19, 14 new highs were recorded among the general stocks on Canadian stock exchanges and 51 new lows. In the mining group there were seven new highs and 55 new lows. In the western oil group there was one new high and 46 new lows.

GENERAL

New Highs—1953

Aluminum Co.	Power Corp. pref.
5¼% pf.	Quebec Pwr.
Can. Car	Shea's Brew. A
Conf. Life	Southam
David & Frere B	Stuart pref.
Grand & Toy	Tuckett Tobacco pf
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The Revolution In Retailing

What's Behind Changes, What The Future Holds

What have been the major factors in the revolution that has come over retailing in Canada in the postwar period? What are the trends for the future? Morgan Reid, assistant vice-president, retail, Simpsons-Sears Ltd., and a foremost Canadian retail authority, discussed these questions in an address to the summer conference of the American Marketing Association in Montreal recently. Here is a digest of his address:

By MORGAN REID

Within the structure of Canadian retailing, there have been few changes over the past twenty years, in the proportion of business by function. But changes in the character of population and of personal incomes have exercised an important influence on the location and type of new retail stores, as well as on merchandising patterns.

For the retailer, the population shift in his marketing area has been met in two ways. He seeks to make it easier for customers to shop in existing locations by urging municipal authorities to reinforce the importance of the core city through better transportation and parking facilities. On the other hand, he is locating new outlets in closer proximity to his customers.

The automobile, of course, has created an entirely new mobile population. It has not only made possible the gregarious clusters of residential development which stretch out into the countryside, but it is also a ready-made delivery wagon for shopping.

No Clear-Cut Solution

Recently there has been an outpouring of articles and speeches to the effect that the future of retail trade lies entirely in the suburban areas surrounding our larger cities. This is the same sort of extreme view as that which would have us believe three-dimensional films are the final answer to the problems of the motion picture industry. I do not think there are any black and white solutions.

In our metropolitan cities, suburban retail development is rather complementary to traditional downtown marketing patterns. After all, this core area is the heartbeat of our great cities. It represents a cumulative physical and social investment that is not going to disappear now or in the future.

Perhaps we have lagged in meeting the demands created by our new mobile population, but since 1945 there has been a realization by municipal authorities that the problem of access to the downtown section must be met.

New express highways, subways, and off-street parking are already in the process of construction or on the drawing boards of many Canadian cities. The downtown department store is making its contribution through an increase in its telephone order operations, in the provision of more adequate delivery services, and in the distribution of catalogues and flyers in the new suburban areas.

Moreover, the downtown department store has a great advantage in merchandising, in depth and breadth, that is not yet equaled by the new suburban developments.

Nevertheless, the department stores have been closely associated with the retail trek to the suburbs — suburbs which sometimes are actually communities themselves several miles from the central city. The stimulus, of course, has been to go where the customers are, where there is adequate parking; and also to avail themselves of the economies of central buying.

Two Kinds of Development

Suburban retail store development has been largely of two kinds. First, there is the branch development usually close in to the inner suburbs. Then there is the regional shopping centre which, because of the maximum pull it exerts, can migrate further to the edges of the metropolitan area, provided it meets certain conditions of accessibility.

The regional shopping centre which usually requires at least 300,000 population within a 20-minute driving distance, depends on the joint efforts of the market analyst and of the architect. The economist establishes the character of the market the centre will serve, and so the retail units that go into it. The architect translates that data into an efficient functional and organic grouping of buildings. Needless to say, the profitable regional centre must supply the majority of consumer retail needs.

Merchandising Developments

Developments in merchandising have been no less important than they have been in retail site selection. We are all acquainted with the greater percentage of consumer income which is being utilized for purchases of durable goods.

Similarly, suburban living and more leisure time have been throwing new emphasis on the fashion element in merchandise—in the broadest sense of the word. What we call casual wear in clothing is descriptive of suburban living.

The power mower and the barbeque, the sports shirt and the sun suit are the symbols of this new market. In the consumer durable goods group fashion becomes translated into "emotional obsolescence" — a phrase coined to express the sales impact of new models.

Rural electrification is exerting a tremendous influence on sales of consumer durables. In Ontario, the farm customers of the Hydro-Electric System have increased some 107% from 1944 to 1951. Even more important to the retailer in terms of increased productivity is a lessening of seasonal influences. July and August, the "dog days" in the retail trade, are assuming more importance. There is also some evidence to indicate that Canadians are doing their Christmas shopping earlier. November is rising in relative sales volume to the month of December.

The personal income flow is also leveling out. Transfer payments show little change from month to month. Agricultural income is more evenly distributed over the year than it was prior to the last war. At the same time, with an economy operating close to capacity, wages and salaries paid out do not show as wide swings as they have in the past.

There are great benefits to be obtained in the reduction of seasonal influences. Those large retail operators who are able to place substantial orders for off-season production with manufacturers are making a contribution in this direction.

Mr. T. V. Houser, Vice Chairman of Sears, Roebuck and Co. (and a director of Simpsons-Sears) has said that according to case studies, a year-end saving of at least 10% to 12% in cost is obtained when a highly seasonal article is produced steadily throughout the year, instead of being produced by an over-expanded labor force part of the time.

Productivity Challenge

Most progressive retailers realize that their industry faces a challenge to increase productivity. The reduction of the seasonal factor, in so far as this is possible, is one approach, but since the consumer is the final arbiter, there are definite limitations.

In terms of profits alone, the retailer who only records 2% to 4% on sales after paying very heavy corporate taxation, has far too narrow a margin — particularly in view of the inadequacy of depreciation allowances.

Nor in this fiercely competitive market for the consumer dollar is there much elasticity upward in gross margin. He can reduce his markdowns to some extent through making greater use of marketing research, which provides him with a more effective knowledge of the changing demands of consumers, but this is somewhat limited to the larger operators. The small retailer must look either to his wholesaler or to the manufacturer for assistance in this direction.

The primary drive for greater productivity must surely come in the area of retail operations. In the first place, the retailer must make sure in his initial investment that his store is a functional medium for the sale of goods, not an expensive monument to an architect's vanity. Above all, he is adopting more effective measures of expense control.

Harvard Improvements

There are some indications that the traditional expense system is not completely meeting the requirements of forecasting, and budgeting controllable outlays, or the improvement of individual operating performance.

The Harvard Bureau of Business Research has taken some steps toward the improvement of productivity measures in operating functions. Analysis is available of "work-centre accounting" or "production-unit accounting" as it is called — the purpose of all these new accounting measures is to achieve a more workable and effective knowledge of retail productivity in specialized functions.

Similarly, with more and more complex appliances appearing on the market, with the public more fashion-conscious, there is a great need for intensive employee training. The salesman who can effectively explain the advantages of his product or offer satisfactory fashion advice is helping to make sure that the customer remains sold.

In recent years, we have also seen an increase in self-service and in self-selection. Self-service is an adequate method of merchandising for staple merchandise and convenience items.

Food and such items as shaving soap, light bulbs, etc., lend themselves to this method of selling when combined with modern methods of display.

For most non-food staple merchandise, however, it has been found that self-selection where the salesman offers his services after the customer has made her preliminary survey of the goods displayed, is a more effective means of selling. It should be combined with use of modern display fixtures which in some cases have increased the productive use of selling space by 50%.

Shift in Store Hours

The retailer has also been shifting his store hours to meet the changing needs of consumers. We have seen an increase in the number of stores staying open one or two nights a week. With many married women working; with the one-car family still the rule; with a greater consumption of consumer durable goods that require a joint buying decision by the family, night shopping provides a distinct service.

This does not mean that night shopping is warranted for every retailer or for every locality, although it is almost a requirement for outlying stores. Again this is a specialized form of retail service which varying circumstances will determine. Because of the relatively short period when husband and wife do their shopping, it is important for newspaper advertisements to tell as much as possible about the merchandise so that the time to close a sale is thereby reduced.

MARGISON BABCOCK & ASSOCIATES LIMITED APPOINTMENTS

H. R. MUSSON | D. L. B. HAMLIN | K. N. CRAIG

R. A. CUNNINGHAM | W. A. STEWART | F. I. L. DYKE

A. D. Margison, Vice-President and General Manager of Margison Babcock and Associates Limited, Consulting Professional Engineers, has announced the promotion of six of the engineering staff to the status of Associates in the firm. All are graduates in engineering and are members of the Association of Professional Engineers. The new Associates are (top row, left to right): H. R. Musson, Supervisor of Heating, Ventilating and Air Conditioning Section, a graduate in engineering physics from the University of Toronto and a Member of the American Society of Heating and Ventilating Engineers; D. L. B. Hamlin, Chief Structural Engineer, a graduate in civil engineering from the University of Toronto and a member of the Engineering Institute of Canada; K. N. Craig, Supervisor of Power Plant and Piping Section, a graduate in mechanical engineering of the University of Toronto and a member of the American Society of Mechanical Engineers (bottom row, left to right): R. A. Cunningham, Supervisor of Field Inspection Section, a graduate in civil engineering from Queen's University and a member of the Engineering Institute of Canada; W. A. Stewart, Supervisor of Municipal Section, a graduate in Civil Engineering from the University of Toronto and a member of the Engineering Institute of Canada; F. I. L. Dyke, Supervisor of Electrical Section and a graduate in Electrical Engineering from Queen's University and a member of the American Institute of Electrical Engineers. Messrs. Musson, Craig and Dyke report to G. R. Beavers, Senior Associate and Chief Engineer of the Building Services Department. Messrs. Stewart and Cunningham report to J. J. Stewart, Senior Associate and Chief Engineer of the Inspection and Municipal Department.

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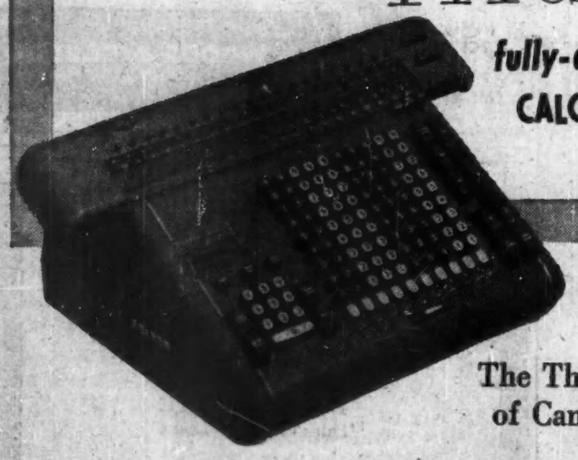

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DIVIDEND NOTICES

THE DOMINION BANK

DIVIDEND NO. 283

Notice is hereby given that a dividend of thirty cents per share on the paid-up capital stock of this Bank has been declared for the quarter ending 31st July, 1953, and that the same will be payable at the Head Office of the Bank and its branches on and after the first day of August, 1953, to shareholders of record of 30th June, 1953.

By Order of the Board.

A. C. ASHFORTH,
General Manager.

Toronto, 18th June, 1953.

ZELLER'S LIMITED

DIVIDEND NOTICE

Notice is hereby given that the following Dividends have been declared by the Directors of Zeller's Limited for the quarter ending July 31st, 1953.

On the 6% Preferred Shares, the regular one and one-half (1½) percent (37½ cents), payable August 1st, 1953, to Shareholders of Record, July 2nd, 1953.

On the 5% Preferred Shares, the regular one and one-quarter (1¼) percent (31¼ cents), payable August 1st, 1953, to Shareholders of Record, July 2nd, 1953.

On the No Par Common Shares, twenty cents per share, payable August 1st, 1953, to Shareholders of Record July 2nd, 1953.

By Order of the Board.

T. E. McDERMOTT,
Treasurer.

Montreal,
June 19th, 1953.

BIRD CONSTRUCTION COMPANY LIMITED

DIVIDEND NOTICE

Notice is hereby given that a dividend of Fifty (50c) cents per share as previously declared on the Company's outstanding Common shares, will be paid on June 30th, 1953, to shareholders of record on the books of the Company as at the close of business June 15th, 1953.

By Order of the Board.

JOHN LAWRIE,
Secretary-Treasurer

Winnipeg, Manitoba,
June 15th, 1953.

DISHER STEEL CONSTRUCTION COMPANY, LIMITED

PREFERRED DIVIDEND NO. 95

Notice is hereby given that the regular quarterly Dividend of Thirty Seven and One Half Cents (37½c) per Share has been declared on the Class "A" Cumulative Redeemable Preference Shares of the Company, payable August 1st, 1953, to Shareholders of record at the close of business, July 17th, 1953.

By Order of the Board.

A. B. LOCKLEY,
Secretary-Treasurer.

Toronto, June 15th, 1953.

DISHER STEEL CONSTRUCTION COMPANY, LIMITED

COMMON DIVIDEND

Notice is hereby given that a Dividend of Twenty Five Cents (25c) per Share has been declared on the Common Shares of the Company, payable August 1st, 1953, to Shareholders of record at the close of business, July 17th, 1953.

By Order of the Board.

A. B. LOCKLEY,
Secretary-Treasurer.

Toronto, June 15th, 1953.

BELLETERRE QUEBEC MINES, LIMITED

(No Personal Liability)

DIVIDEND NO. 17

Notice is hereby given that a dividend of five cents (5c) per share in Canadian currency will be paid on September 15, 1953, to shareholders of record at the close of business August 14, 1953.

By Order of the Board.

F. T. McKINNEY,
Secretary.

Dated at Toronto, June 15th, 1953.

IMPERIAL TOBACCO COMPANY OF CANADA, LIMITED

DIVIDEND

NOTICE is hereby given that a Dividend (No. 23) of twenty-five cents (25c) per share has been declared for the quarter ending 31st July, 1953, on the paid-up 4% Cumulative Redeemable Sinking Fund Preference Shares of the Company. The said Dividend will be paid on Saturday, the 1st day of August, 1953, to shareholders of record at the close of business on Friday, the 3rd day of July, 1953.

By Order of the Board.

H. E. JACKSON,
Secretary.

MONTREAL, P.Q.,
18th June, 1953.

Reitman's (Canada) Limited

PREFERRED DIVIDEND NO. 25

NOTICE is hereby given that a quarterly dividend of 1¼% (25c) per share has been declared on the outstanding 5% Cumulative Redeemable Preferred Shares of the Company, payable on August 1st, 1953 to shareholders of record at the close of business on July 15th, 1953.

By Order of the Board.

JACK REITMAN,
Secretary-Treasurer.

Montreal, June 18th, 1953.

Reitman's (Canada) Limited

COMMON DIVIDEND NO. 12

NOTICE is hereby given that a quarterly dividend of 15c per share has been declared on the New Common Shares of the Company, payable on August 1st, 1953 to shareholders of record at the close of business on July 15th, 1953.

By Order of the Board.

JACK REITMAN,
Secretary-Treasurer.

Montreal, June 19th, 1953.

DIVIDEND NOTICES

THE CANADIAN BANK OF COMMERCE

DIVIDEND NO. 268

NOTICE is hereby given that a DIVIDEND OF THIRTY CENTS per share on the paid-up Capital Stock of this Bank has been declared for the quarter ending 31st July, 1953 and that the same will be payable at the Bank and its Branches on and after SATURDAY, the FIRST day of AUGUST next, to Shareholders of record at the close of business on 30th June, 1953. The Transfer Books will not be closed.

By Order of the Board.

N. J. McKINNON,
General Manager.

Toronto, 29th May, 1953.

DIVIDEND NOTICE

HENDERSHOT PAPER PRODUCTS, LIMITED

The Board of Directors of Hendershot Paper Products Limited, at a meeting thereof held on June 16th, 1953, declared a twenty-fifth quarterly dividend of 25c per share on all outstanding Common Shares of the Company, payable July 2nd, 1953, to shareholders of record as at the close of business June 24th, 1953.

By Order of the Board,
W. A. W. Dickson,
Secretary-Treasurer.

CANADIAN PACIFIC RAILWAY COMPANY

Dividend Notice

At a meeting of the Board of Directors held today a dividend of seventy-five cents per share on the Ordinary Capital Stock was declared in respect of the year 1953, payable in Canadian funds on August 1, 1953, to shareholders of record at 3.30 p.m. on June 19, 1953.

By order of the Board.

FREDERICK BRAMLEY,
Secretary.

Montreal, June 8, 1953.

N. SLATER COMPANY LIMITED

HAMILTON - CANADA

DIVIDEND NOTICE

A quarterly dividend of 53 cents per share on the outstanding Preferred Stock of the Company has been declared payable on July 15th, 1953, to shareholders of record at the close of business on July 3rd, 1953.

Also, a quarterly dividend of 45 cents per share on the outstanding Common Stock has been declared, payable on August 1st, 1953, to shareholders of record at the close of business on July 10th, 1953.

E. GARSIDE,
Secretary.

WOOD ALEXANDER LIMITED

Notice is hereby given that a regular quarterly dividend of 1½% per share has been declared on the 6% Cumulative Redeemable Sinking Fund Preference Shares; payable July 2nd, 1953, to shareholders of record as at the close of business June 16th, 1953.

Notice is hereby also given that a dividend of Fifteen cents (.15) per share on the Common Shares of the Company has been declared payable on July 16, 1953, to shareholders of record as at close of business June 30, 1953.

By Order of the Board.

JAMES STONEHEWER,
Secretary-Treasurer

Notice is hereby given that the Directors of Pioneer Gold Mines of B. C. Limited (N.P.L.) have declared an interim dividend of ten cents per share, payable on August 15th, 1953, to shareholders of record July 15th, 1953.

By Order of the Board.

ROSS THOMPSON,
Secretary-Treasurer.

June 9th, 1953.

McINTYRE PORCUPINE MINES, LIMITED

(No Personal Liability)

DIVIDEND NO. 153

Notice is hereby given that a dividend of fifty cents (50c) per share in Canadian currency will be paid on September 1st, 1953, to shareholders of record at the close of business July 31st, 1953.

By Order of the Board.

W. B. DIX,
Treasurer.

Dated at Toronto, June 15th, 1953.

ENAMEL & HEATING Products Limited

DIVIDEND NOTICE

Notice is hereby given that a Dividend of 10c per share has been declared on the issued and outstanding capital stock of the Company, payable on Friday, July 31, 1953, to shareholders of record at the close of business June 30, 1953. This dividend is payable on Common Stock as presently constituted after sub-division in accordance with supplementary letters patent (4 new shares for one old) dated July 9, 1951.

By order of the
Board of Directors.

A. R. French,
Secretary-Treasurer.

SACKVILLE, N.B.,
June 19, 1953.

DIVIDEND NOTICES

BATHURST POWER & PAPER COMPANY LIMITED

NOTICE OF DIVIDEND ON CLASS A SHARES

The Board of Directors has to-day declared a quarterly dividend of Seventy-five cents (75c) per share on the outstanding Class A shares of this Company, payable on the 1st day of September, 1953, to shareholders of record at the close of business on the 4th day of August, 1953.

E. S. KIRKLAND,
Secretary.

June 22nd, 1953.

GURNEY PRODUCTS LIMITED

QUARTERLY DIVIDEND

Notice is hereby given that Quarterly Dividend No. 10 of Forty Cents per share has been declared on the outstanding Preferred Shares, payable August 1st, 1953, to Shareholders of record July 15th, 1953.

By order of the Board.

R. S. M. AUSMAN,
Secretary-Treasurer.

DIVIDEND NO. 55

Hudson Bay Mining and Smelting Co., Limited

A Dividend of one dollar ($1.00) (Canadian) per share has been declared on the Capital Stock of this Company, payable September 8, 1953, to shareholders of record at the close of business on August 7, 1953.

H. E. DODGE, *Treasurer.*

STANLEY BROCK LIMITED

Dividend Notice

NOTICE is hereby given that a dividend of 15 cents per share on the outstanding Class A Shares of the Company and 10 cents per share on the outstanding Class B Shares of the Company has been declared payable 1st August, 1953 to shareholders of record 10th July, 1953.

By Order of the Board.

D. A. THOMPSON,
Secretary.

Winnipeg, Manitoba, 17th June, 1953.

Penmans

DIVIDEND NOTICE

NOTICE is hereby given that the following Dividends have been declared for the quarter ending the 31st day of July, 1953.

On the Preferred Stock, one and one-half per cent. (1½%), payable on the 1st day of August to Shareholders of record of the 2nd day of July, 1953.

On the Common Stock, seventy-five cents (75c) per share, payable on the 15th day of August to Shareholders of record of the 15th day of July, 1953.

By Order of the Board.

L. P. ROBERTON,
Secretary-Treasurer.

MONTREAL,
June 22, 1953.

ANGLO—HURONIAN LIMITED

DIVIDEND NO. 33

NOTICE IS HEREBY GIVEN that a dividend of Twenty-five Cents (25c) per share, in Canadian Funds, on the issued capital stock of the Company has been declared payable July 23rd, 1953 to shareholders of record at the close of business July 9th, 1953.

J. INGRAM,
Secretary-Treasurer

Toronto, June 19th, 1953.

ANGLO-CANADIAN TELEPHONE COMPANY

Class A Dividend Notice

NOTICE is hereby given that a dividend of One and One-half percent (1½%) has been declared on the Class A Stock of the Company, payable September 1, 1953 to Stockholders of record at the close of business on August 10, 1953.

By Order of the Board,
CAMERON HOUGH, F.C.I.S.
Secretary.

Montreal, June 1, 1953.

ANGLO-CANADIAN TELEPHONE COMPANY

Preferred Dividend Notice

NOTICE is hereby given that a dividend of One and One-Eighth percent (1⅛%) has been declared on the 4½% Cumulative Preferred Stock of the Company for the quarter ending July 31, 1953, payable August 1, 1953 to Stockholders of record at the close of business on July 10, 1953.

By Order of the Board.
CAMERON HOUGH, F.C.I.S.
Secretary.

Montreal, June 1, 1953.

STELCO

THE STEEL COMPANY OF CANADA, LIMITED

PREFERENCE DIVIDEND No. 168

Notice is hereby given that dividend No. 168 of twenty cents (20c) per share for the quarter ending June 30, 1953, has been declared upon the Preference Shares of the Company, payable Saturday, August 1, 1953, to shareholders of record at the close of business Tuesday, July 7, 1953.

By Order of the Board,
H. S. ALEXANDER,
Secretary.

Hamilton, Canada, June 19, 1953.

STELCO

THE STEEL COMPANY OF CANADA, LIMITED

ORDINARY DIVIDEND No. 146

Notice is hereby given that dividend No. 146 of twenty cents (20c) per share for the quarter ending June 30, 1953, has been declared upon the Ordinary Shares of the Company, payable Saturday, August 1, 1953, to shareholders of record at the close of business Tuesday, July 7, 1953.

By Order of the Board,
H. S. ALEXANDER,
Secretary.

Hamilton, Canada, June 19, 1953.

Big Crop, But at What Price?

Here's Outlook as Prairies Move Into Growing Season

Special Correspondence

WINNIPEG — Present outlook for the western grain crop is good, with the possibility of a heavy yield. Experienced observers, although hopeful, restrain their optimism, recalling that in most years the crop condition is at its best toward the end of June, and that there are many hazards to be run after that date.

No one ventures to hope that this year's outturn will equal the extraordinarily high yield of 1952. Acreage seeded is considerably less than last year, as time did not permit as large an acreage as farmers would have liked to seed. Much seeding was late, with an unusually high percentage of the acreage exposed to the dangers of frost before the grain has had time to mature fully.

Hopes for the crop are much higher now than was the case when spring opened. Subsoil moisture reserves were unusually low, due to a dry fall. It was realized that this year's crop would be unusually vulnerable to a dry season; fears were widely expressed that Western Canada was due for a return of the drought years which created havoc with crop production during the early thirties. It would take unusually heavy rains to make up for the deficiency of soil moisture. Now, after much rain, there is enough moisture for present needs and for some weeks ahead over the greater part of the grain growing area.

Rainfall Since April 1

Most reporting stations have had more than average rainfall since April 1. Some have had twice as much as usual and in a few places almost three times as much has been recorded. That condition is most marked in the southwestern portion of the Prairies, in what is known as the Palliser Triangle, an area where dry years are frequently experienced and where the average yield expectation is fairly low. It is quite possible now for a heavy crop to be harvested there.

Rainfall has been lighter in the northern portions of Alberta and Saskatchewan, and at a considerable number of points somewhat less than average. That is compensated for by residual moisture left from winter snows, which not only provided adequate moisture for seeding but was enough to delay operations on the land to a late date.

Almost everywhere the seeding season was late in opening. Once it had begun, operations were delayed by frequent rains. Almost nowhere were farmers able to put in their expected acreage of wheat by May 24, a date by which most farmers would like to have their wheat seeding completed. It is usually considered that some risk of fall frosts attends any wheat sown after that date.

From then until early June, farmers like to put in their oats and barley, crops with a shorter growing period, the later seeding of which is regarded as safe. This year a great deal of wheat was seeded after June 1 and some wheat was put in after June 10. Seeding of oats and barley was carried on until well past the middle of the month. Even so, perhaps 10% of the land which farmers had intended to put into crop had to be left unseeded, and of that which was seeded probably several hundred thousand acres in low lying spots was drowned out by excessive moisture.

But that same excess of moisture can produce yields much heavier than average on other land, always provided that the grain gets sufficient time to mature before it is hit by frost.

There is a possibility, although not yet a likelihood, of extensive rust damage this year. Formerly rust did a certain amount of damage almost every year, and in occasional years a tremendous amount of damage. That seemed to be a diminishing danger when new varieties of rust-resistant wheat were introduced, now widely grown in the susceptible areas.

Unfortunately, new varieties of rust, to which the new varieties of wheat are susceptible, have been making their appearance. Already these have shown up in the spring wheat states south of the international border, and traces have been found in some Manitoba fields. Appearance is earlier than used to be the case, and with a late crop there is a long period ahead during which rust could spread during hot and humid days such as promote its growth.

Delivery Problem

It was calculated that from last year's great crop farmers had 950 million bushels to deliver by July 31 next. At one time delivery of that quantity of grain seemed possible, but only by leaving the country elevator system of Western Canada practically full at the end of the crop year.

Deliveries have been somewhat slower than anticipated due in part to transportation difficulties and also to the eight-week strike of terminal elevator employees at Vancouver which kept that port closed to grain movement during a period when heavy grain shipments would otherwise have been possible.

Deliveries have also been slow during the past six weeks because of farmers' preoccupation with seeding, or where roads were bad. In addition, many farmers held back their possible deliveries for a time due to fears of drought conditions this year and a desire to make sure of holding necessary reserves of feed grain.

It is now thought that the season may end with perhaps more than 100 million bushels of old crop grain still in farmers' hands for delivery. That will mean, if this year's grain yields are good, continued pressure on country elevator space during many weeks of the new crop year.

The United States, instead of having a short wheat crop as was feared earlier this year, is now likely to produce well over a billion bushels of wheat. With a large carryover in that country as well as in Canada, and with the possibility of a good Canadian yield, North America will have available for export more than is required.

The price has still been holding well above the $1.86 per bushel, including carrying charges, at which wheat is still available under the International Agreement to many countries. But it has dipped below the $2.05 per bushel which will be the maximum level for the new International Wheat Agreement if it comes into effect on Aug. 1 next.

Under these conditions, it is thought that many importing countries may be less anxious than they formerly were to have the renewed agreement effective. They may abstain, to a sufficient extent, to render void the preliminary signatures, prior to ratification, recently appended to the new agreement at the conclusion of the Washington Conference.

That fact in itself is not to be regarded as important in influencing price trends. Not unless the open market price should drop as low as $1.55 per bushel would the agreement become important as a price-sustaining factor.

• Export demand has been strong for Canadian grain throughout this crop year, for oats and barley as well as for wheat. Total sales may well make a new high level. Export demand still remains good although some temporary relaxation in buying from abroad is noted. This is partly because some countries want to rely on home produced wheat stocks during the early part of a new crop year. Some of them may be delaying their buying in the hope of prices somewhat lower than now prevail.

British import trade is in process of passing out of government hands into that of regular dealers, in line with the policy announced some months ago. While British stocks of stored grain can never be high enough to last for any extended period, they are understood to be very substantial at this moment, no doubt accumulated in order to ease the process of transition.

Grain Prices

Chicago Futures

Week to June 22, 1953

Crop year from Aug. 1, 1952 High	Low		High for week	Low for week	Close June 22
Wheat—					
2.48⅜	1.87	July	2.04⅜	1.87	1.97⅛
2.47⅛	1.89	Sept.	2.08⅛	1.89	2.01⅜
2.40⅛	1.96⅛	Dec.	3.13⅛	1.96⅛	2.08
2.37⅛	2.01⅜	Mar.	2.16⅜	2.01⅜	2.13⅛
2.21	2.04⅛	May	2.20	2.04⅛	2.14⅛
Corn—					
1.81	1.46⅜	July	1.53⅛	1.46⅜	1.53⅛
1.76⅛	1.45⅛	Sept.	1.50⅜	1.45⅛	1.50⅛
1.64⅛	1.40⅜	Dec.	1.46⅜	1.40⅜	1.45⅛
1.57⅜	1.45⅛	Mar.	1.49⅜	1.45⅛	1.49⅛
1.53⅜	1.47⅜	May	1.53⅜	1.48	1.53⅜
Oats—					
.83⅛	.63⅛	July	.74⅛	.69⅛	.74⅛
.84⅛	.68	Sept.	.75	.69⅜	.73⅛
.79⅛	.71⅛	Dec.	.77	.72⅛	.75⅛
.78⅜	.73⅛	Mar.	.76⅛	.73⅛	.76⅛
.76⅛	.73⅛	May	.75⅜	.73⅛	.75⅛
Rye—					
2.12⅛	1.32⅜	July	1.44⅛	1.32⅜	1.38⅛
2.04	1.36⅛	Sept.	1.49⅛	1.36⅛	1.42⅜
1.79⅛	1.42⅛	Dec.	1.52	1.42⅛	1.48⅛
1.59⅜	1.47⅛	Mar.	1.56	1.47⅛	1.53⅛
Soybeans—					
July			2.89⅛	2.77⅛	2.82
Sept.			2.73	2.62⅛	2.68⅛
Nov.			2.63⅛	2.45	2.61⅛
Jan.			2.67	2.60⅛	2.64⅛
Mar.			2.69⅛	2.63	2.67⅛

Chicago Cash

	For Week June 22 High	Low	Prev. week High	Low
Corn—				
2 Yell.	1.55⅛	1.51⅛	...	...
Oats—				
1 H. Wh.	.77	.77	.79⅛	.77⅛

Winnipeg Futures

Week to June 22, 1953

Crop year from Aug. 1, 1952 High	Low		High for week	Low for week	Close June 22
Oats—					
.81⅛	.67⅛	July	.70⅛	.68⅛	.70⅛
.77⅛	.68⅛	Oct.	.70⅛	.69⅛	.70⅛
.71⅛	.67⅛	Dec.	.70⅛	.68⅛	.70⅛
Barley—					
1.23⅛	1.12⅛	July	1.16⅛	1.16⅛	1.16⅛
1.20⅛	1.12⅛	Oct.	1.14⅛	1.12⅛	1.13⅛
1.15⅛	1.08⅛	Dec.	1.10⅛	1.08⅛	1.10
Rye—					
1.94⅛	1.23⅛	July	1.33	1.23⅛	1.28⅛
1.74	1.26⅛	Oct.	1.35⅛	1.26⅛	1.31⅛
1.53	1.28⅛	Dec.	1.37⅛	1.28⅛	1.33⅛
Flax—					
3.59	2.81	July	3.03	2.83	2.90⅛
3.20⅛	2.83⅛	Oct.	3.06	2.87	2.94⅛
3.13	2.85	Dec.	3.02	2.85	2.91⅛

Winnipeg Cash

	For Week June 22 High	Low	Prev. week High	Low
Oats—				
2 C. W.	.70⅛	.69⅛	.70⅛	.69⅛
3 C. W.	.67⅛	.66⅛	.68	.66⅛
Barley—				
1 Feed	1.21⅛	1.16⅛	1.27⅛	1.23
2 Feed	1.18⅛	1.13⅛	1.24⅛	1.19⅛
1 Malt	1.22⅛	1.19⅛	1.27⅛	1.23⅛
Rye—				
2 C. W.	1.29⅛	1.25⅛	1.33⅛	1.28⅛
1 C. W.	1.29⅛	1.25⅛	1.33⅛	1.28⅛

Government Bonds

June 23, 1953 (Supplied by Investment Dealers' Assoc. of Canada)

%	Due	Bid	Ask
Victory Loans:			
3	Mar. 1954	100⅛	101⅛
3	Nov. 1956	99⅛	101
3	May 1957	98⅛	98⅞
3	Jan. 1959	96⅞	97⅛
3	June 1960	95⅛	96⅛
3	Feb. 1962	94⅛	95⅛
3	Oct. 1963	92⅛	93⅛
3	Sept. 1966	92⅛	93
Dom. of Can. Bonds:			
3	June 1958	97⅛	97⅞
3¼	June 1966	94⅜	95⅛
3	Perpetual	81⅛	82⅛
2½	June 1968	89⅛	89⅞
3¼	Jan. 1975/78	97	98
Can. Nat. W. Ind. S.S.:			
5	Mar. 1955	●102⅛	103⅛
Grand Trunk Pacific Ry.:			
3	Jan. 1962	●96⅛	98
4	Jan. 1962	●102⅛	104⅛
Can. Nat. Railways:			
3	Jan. 1938	85⅛	96⅛
4½	Feb. 1956	●102⅛	104
4½	July 1957	●103⅛	105
5	Feb. 1954	100⅛	101⅛
4½	June 1955	●102⅛	104
2½	Jan. 1967	87⅛	88⅛
2½	Sept. 1969	87	88⅛
3	Jan. 1966	91⅛	93⅛

(Supplied by Investment Dealers' Assoc. of Canada)

%	Due	Bid	Ask
Prov. Govt. Bonds			
Alberta:			
2½	Mar. 1970	●89½	92½
British Columbia:			
4½	Jan. 1969	●105⅛	108⅛
5	Sept. 1953	100⅛	100⅛
3	Dec. 1960	93⅛	95⅛
3	June 1964	89⅛	92
5	Sept. 1959*	●106⅛	108⅛
B. C. Power Comm.:			
3	Oct. 1967	87⅛	89⅛
Manitoba:			
4	Dec. 1957	●101	102⅛
5	Dec. 1959	●107⅛	109⅛
5½	July 1958	104	106
3	Oct. 1965	87⅛	90⅛
4½	Dec. 1956	●102⅛	104⅛
New Brunswick:			
4½	Apr. 1961	●101⅛	104
2½	June 1966	83⅛	84⅛
3½	May 1957	95⅛	97⅛
3½	Sept. 1965	90	91⅛
Nova Scotia:			
4½	Nov.*1960	●103⅛	105⅛
5	Mar. 1960	●105⅛	107⅛
3½	June 1963/65	91⅛	92⅛
3	June 1956/58	94⅛	96⅛
2½	June 1965/66	83⅛	85⅛

%	Due	Bid	Ask
Ontario:			
2½	Nov. 1965/69	83⅛	85⅛
4	June 1962	●100⅛	103⅛
4½	Jan. 1962	●104⅛	107
2½	July 1967/76	81⅛	84⅛
3	Nov. 1963/65	89⅛	91⅛
5	May 1959	●106⅛	108
Ont. Hydro Commission:			
4	Aug. 1957	●100⅛	102⅛
2½	Oct. 1965/68	84⅛	85⅛
3	Dec. 1963/65	90	91
3	Nov. 1967/69	86	87⅛
Prince Edward Island:			
3	Oct. 1965	88⅛	90
Quebec:			
2½	Mar. 1954/59	97⅛	98⅛
3½	Feb. 1952/56	100	100⅞
4½	Aug. 1958	101	102
4½	Jan. 1963	102	103⅛
3	Sept. 1962/64	90⅛	91⅞
Quebec Hydro Commission:			
3	Feb. 1969/73	86⅛	87⅞
3	Dec. 1958/60	94⅛	95⅛
Saskatchewan:			
4	Nov. 1955/60	99	100⅛
5	Aug. 1958	102⅛	105⅛
4½	Mar. 1960	●104⅛	106⅛
5	Dec. 1959	●107⅛	109⅛
3	Mar. 1963	88⅛	91⅛
3½	Nov. 1960/62	90⅛	93⅛
3½	Oct. 1962/63	86	97⅛

Issued by the Dominion Bureau of Statistics
●Payable Can. or N.Y. *Payable Can., N.Y. or £.

Stock Redemptions

Company:	Rate	Date	Price
*Emp. Brass Mfg. Co.	5%	July 15	$23.00●

*All outstanding.
●Plus accrued dividend.

Unlisted Mines, Oils

(Compiled from Quotations by G. E. Leslie & Co., Montreal)
June 22, 1953

Stock	Bid	Offer	Stock	Bid	Offer
Aconic	1.40	1.48	Kenmac	10	13
Am. As.	45	50	Wm. Leys	27	30
Anthonian	43	47	Lorie New	14	17
Adelmont	5	6	Montgom'y	25	30
Adnqr	11	13	Pascar	15	20
Bar-Lan	13	16	Provincial	10	12
Belmont	9	12	Perzh. Man.	7	10
Baker Talc	50	60	Pinnacle U	37	40
Belpat	52	57	Q'maque	off.	35
Burnt H.	1.65	1.75	Sig. O&M	78	86
Christie	27	29	S. Bach	off.	35
Flonic Ch.	2	4	Titanium	off.	14
Intl. Asb.	50	53	Tomiska	4	7
Juno	40	45	Troysco	18	20

Municipal Bonds

June 23, 1953

	Coup. %	Matur.	Bid $	Ask. $	Yld. %
Calgary	3½	'69	84¾	86¾	4.67
Edmonton	3½	'69	83	86	4.72
Halifax	3½	'66	87½	89½	4.60
Hamilton	3	'67	83½	85½	4.40
Montreal	3	'70	81	84	4.29
Moose Jaw	3½	'60	90	92	4.72
Ottawa	3¼	'63	87¼	89¼	4.25
Regina	3	'64	82	84	4.77
St. John	3½	'65	87½	89½	4.65
Toronto	3	'69	83	85	4.35
Vancouver	3¾	'69	88¼	90¼	4.62
Victoria	3¾	'68	86¾	88¾	4.81
Windsor	2¾	'75	64	67	5.25
Windsor	2½	'75	60¾	63¾	5.25
Windsor	3½	'75	74	77	5.25
Winnipeg	3	'69	83½	84½	4.53

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An accident in your power plant can have three serious effects. One, valuable power machinery can be wrecked—Two, the building and property of others can be damaged—Three, your plant can be shut down. Our Company's policies can be written to cover all three losses. In addition, our staff of inspection specialists periodically checks every piece of equipment covered by our policies to greatly reduce the risk of accidents. We're sure you'll agree, that this triple protection plus prevention is the wisest insurance for any power plant.

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BALTIMORE MINNEAPOLIS DULUTH LONDON LIVERPOOL

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GRAIN & FORAGE CROP SEED
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WINNIPEG, CANADA

FEDERAL GRAIN LIMITED
AND
THE ALBERTA PACIFIC GRAIN CO. (1943) LTD.
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Branch Offices—Fort William, Ont., Montreal, Que.
—Vancouver, B.C.

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- Mechanical Draft apparatus — Forced and Induced Draft Fans
- Electrical Ventilating equipment in all sizes
- Gas-fired, Steam and Hot Water Unit Heaters
- Complete line of Heating and Cooling Coils
- Gyrol Fluid Drives for smooth power transmission
- Dust Collectors and Fly Ash Precipitators

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*Edmonton	*Kirkland Lake	*St. John's	Windsor
*Halifax	Montreal	*Sydney	*Winnipeg
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TERMINAL ELEVATORS AT PORT ARTHUR AND VANCOUVER.

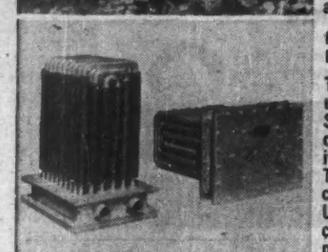
UNITED GRAIN GROWERS LTD.

WINNIPEG SASKATOON EDMONTON CALGARY

Unifin* eliminates all common finned tube difficulties

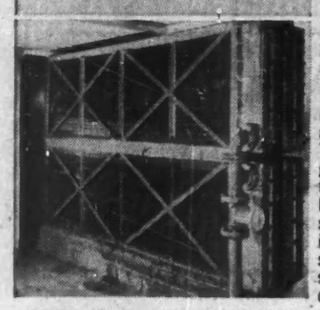
IT IS UNAFFECTED BY VIBRATION

Shown here are two Canadian Ingersoll-Rand 125 CFM All-Canadian air compressors fitted with Unifin intercoolers fabricated from copperline tubing, an integral aluminum finned tube with a seamless copper liner. These compressors are supplying air to pneumatic hammers at several thousand feet above sea level on the Aluminum Company of Canada's Kitimat-Kemano project.



IT WITHSTANDS INTENSE HEAT

This Unifin water cooling coil is used by Dominion Foundries & Steel Ltd., Hamilton, Ont., for cooling manufactured gas prior to its entry into a transmission line. The temperature of the gas before cooling is approximately 1000° F. Unifin is the only finned tube capable of withstanding this temperature.



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Algoma Uranium Camp Still In Infancy But 40,000 Acres Said Already Staked

Work on the Peach Uranium & Metals discovery property started only on April 1 but results secured have already precipitated large claim-staking activities even though results secured have been kept a close secret.

The Financial Post was told early this week that 40,000 acres had been recently staked in the area, Harry Buckles, mining engineer of Technical Mine Consultants and a former McKenzie Red Lake mine manager, says claim staking must have at least reached this total.

While many of the really choice mine bets have undoubtedly been taken up, this area might well be termed a prospector's as well as a mine maker's dream. The Peach property is traversed by a dual lane paved highway. It is only 1½ miles from a main line of the CPR and just slightly more north of Lake Huron in the Manitoulin Island section.

The discovery has been made in summer resort country and there will be none of the hardships of outlying country like Beaverlodge or Great Bear. The Peach crew has been housed in a neighborhood farm house.

Officials have not yet had time to work out possible operating costs on a property like Peach but $6 a ton is hazarded as a target. Application of a leach process would mean a high rate of extraction, it is anticipated. Emergence of a new Ontario chemical industry could be in the books.

For the mining man, the deposit consists of a mineralized replacement deposit in a series of pre-Cambrian sediments. The mineralized zone rests on an intrusive complex of diorite, diabase and granite. The radioactive zone is from 5 to 15 ft. thick and dips about 15 deg. to the south. In view of its flat dip, very short drill holes can quickly determine tonnage and grade, since it is a question of testing area rather than depth.

Most of the immediate attention of the prospecting fraternity will likely be given to acquisition of close-in ground — whatever still remains available. But the geological setting suggests a wider area of possible uranium promise for Ontario. The deposit is located close to the north contact of a great east-west trending belt of greenstone rocks which extends 80 to 100 miles eastward where it becomes a tangent to the great Sudbury Basin "rim." Along the contacts of this greenstone belt, and within it, may possibly lie other Eastern Canada uranium prizes.

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Company Reports

To assist readers in appraising and comparing company financial statements, The Financial Post has a uniform method of presenting corporation accounts. Variations from the companies' published reports are footnoted.

Western Oils

PACIFIC PETROLEUMS anticipates that revenue from currently producing wells will be "substantially increased" with August completion of Trans-Mountain Pipeline to the Pacific Coast and the extension of the Interprovincial Pipeline eastward now under way.

Net returns from well and servicing operations were $723,839 with a net profit of $7,402 after crediting $820,082 to revenues for exploration and drilling credits applied to lease rentals, etc.

The groundwork is stated to have been laid for "even greater developments during the forthcoming year" than progress made in the past year.

Developments in the Fort St. John field of the Peace River area of British Columbia are indicated as of major importance to the company with an interest held in 2.5 million acres on which eight drill rigs have been continuously employed. Proven wet gas reserves are estimated at 1.5 trillion cu. ft.; 17 successful gas wells have been completed with open flow potentials as high as 52 million cu. ft. per day.

"This gas being rich in natural gasoline, propane, butane and sulphur, will produce substantial by-product income for the company when the Westcoast Transmission Co. pipeline project provides a market for gas production," says President George L. McMahon.

Pacific participated with Stanolind Oil & Gas, Imperial and others in a D3 discovery on unitized acreage in the St. Alberta area where three oil wells have so far been completed. A 30% interest is held in a quarter section at Erskine offset by several producing wells where drilling is expected to be done shortly.

During the year ended Feb. 28, 1953, approximately $1,853,000 was spent on various properties. Working capital of $2,086,599 reported below does not take into account some $3,104,000 excess market value over book cost of marketable securities now held, nor a market appreciation of approximately $8,869,000 on the investment in the subsidiary, Peace River Natural Gas Co.

Earnings potential of the company is stated to be the strongest in its history. The company anticipates that it will add substantially to productive gas wells in the prolific Fort St. John field during the coming year.

INCOME ACCOUNT

Years Ended Feb. 28-29:	1953	1952
Net inc. from wells	$723,839	$770,439
Add: Invest. inc.	49,925	51,309
Govt. credits	820,082	.....
Prof., sale of f.a., etc.	125,360	3,537,238
Tax adj. pr. yrs.	.....	.....
Int. rec., etc.	4,785	10,076
Total net income	1,724,063	4,369,062
Less: Admin. & gen. exps. (net)	885,364	1,083,397
Deprec.	164,067	130,720
Interest	37,521	31,410
Net profit bef. w/o	636,741	3,123,535
Less: Devel. exp. w/o	.....	816,604
Depletion	154,563	177,244
Explor. & dev.	474,776	934,142
Net prof. after w/o	7,402	1,195,339
Earned per Share:		
Before w/o	$0.14	$0.70
After w/o	0.0017	0.27
None paid.		

CONDENSED BALANCE SHEET

As at Feb. 28-29:	1953	1952
Cash	$56,677	$1,067,410
Mkt. secs.*	1,736,665	2,604,834
Accts., etc., rec.	1,451,676	1,356,184
Inventories	1,132,689	533,471
Total curr. assets	4,377,710	5,561,899
Def. accts. rec.	1,020,944	430,477
Prep. chgs.&	18,546	28,252
Invest. in subs.	1,155,378	1,176,111
Invest. after res.	330,123	102,360
Def. chgs	1,189,856	.....
Devel. prod., wells, plant & equip.‡	5,015,773	4,545,695
Total assets	13,108,330	11,844,794
Unexpended calls	282,765	.....
Accts., etc., pay.	2,008,346	930,330
Total curr. liab.	2,291,111	930,359
Def. liabs.	.....	66,514
Mortgage loan	689,745	737,085
Capital stock	4,456,863	4,455,363
Capital surplus	†4,504,843	†4,497,136
Surplus	1,165,768	1,158,366
‡After: Depr. of	383,704	266,368
Depletion of	490,807	393,810
Devel. w/o of	.....	1,000,000
*Mkt. value	4,811,296	4,931,181

†Incl. $3,752,861 premium on 828,000 shs. issued during 1950 and $154,908 premium on 36,763 shs. issued during 1951 and 1,500 shs. issued in 1952.
‡Incl. in curr. assets in co's report
Working capital 2,086,599 4,631,540

CANADIAN ATLANTIC OIL CO. reports two important developments in the year ended Feb. 28, 1953:

—Development of large additional gas reserves through extensive drilling carried out by Pacific Petroleums, Canadian Atlantic and associates in the Fort St. John area of Northeastern B.C.

—Progress of Westcoast Transmission Co. in securing authorizations required to provide a market for gas production of the Peace River area in the Pacific northwest area of B.C., Washington and Oregon.

Proved wet gas reserves at Fort St. John are stated to exceed 1.5 trillion cu. ft. Limits of this field have not been determined and the company will continue to participate in stepout and development drilling in the coming year.

Eight drills have been continuously employed and two seismograph and one core drill have been employed in exploration of lands adjacent to Fort St. John.

A fourth well was completed on an Armena quarter section and a 10% interest is held in a quarter at Erskine where drilling is proposed. A 12½% interest is also held in current drilling of a well on a structural feature in the West Leduc area.

Western Canada oil industry marketing of 600,000 bbls. of oil daily is anticipated in 1954.

Gross sales of crude were $67,686 higher at $899,482. Net return was $57,053 higher at $600,856. After all charges there was a net profit of $16,856 as against a $381,965 loss a year earlier.

INCOME ACCOUNT

Years Ended Feb. 28:	1953	1952
Prod'n revenue	$899,482	$831,796
Less: Royalties	131,462	118,750
Add: Atl. No. 3 rev.	35,111	167,583
Misc. income	*267,417	12,907
Total net rev.	1,070,548	893,526
Less: Oper. exp.	288,080	280,232
Leasehold carrying chge.	203,642	.....
Roy. invest. w/o	4,200	.....
Deprec.	3,664	2,530
Deplet. of prop.	156,096	150,824
Interest	.....	23,861
Leases surr.	299	1,194
Taxes	63,141	.....
Loss sale of dec.	1,050	.....
Net profit before w/o	350,376	434,885
Less: Expl. & dev.	332,520	816,850
Net profit & surp.	17,856	‡381,965

*Including $237,738 govt. explor. & drilling credits of which $88,659 applied to prior years.
‡Loss or deficit.
Earned per Share $0.0061 ‡$0.13
None paid.

CONDENSED BALANCE SHEET

As at Feb. 28:	1953	1952
Cash	$717,656	$1,918,386
Accts., etc., rec.	65,565	136,059
Guart. Trust cert.	750,000	.....
Mkt. sec.	316,760	290,666
Total curr. assets	1,849,981	2,345,111
Deposits, etc.	65,904	121,356
Investments	92,665	80,295
Drilling in progress	244,011	.....
Leases, land, devel., etc.▲	3,194,624	2,968,340
Plant & equip.†	127,904	144,834
Total assets	5,575,149	5,665,636
Accts., etc., pay.	89,165	165,130
Taxes	39,686	.....
Total curr. liabs.	168,851	165,130
Def. credit	.....	51,299
Def. liabs.	.....	775
Capital stock	5,963,342	5,963,342
Capital deficit	580,069	580,069
Earned surplus	183,025	165,199
†After depr. res. of	222,956	173,575
▲After deplet. res. & w/o of	494,823	381,963
Working capital	1,741,130	2,179,981

Calgary Exchange Buys Building

A former dance hall will become the new home of the Calgary Stock Exchange about July 1. The modern exchange at 7th Ave. and 5th St. W., purchased this month, will replace the exchange occupied since the thirties.

Equipment in the new premises of the 74-member exchange includes a translux ticker service from Toronto, a 60-ft. stock quotation board, and space for 50 telephone booths instead of the present 32.

L. B. Gibson has taken office as new president of the exchange. A. M. McNabb was named first vice-president, Brian Locke second vice-president and H. M. Kerr secretary-treasurer.

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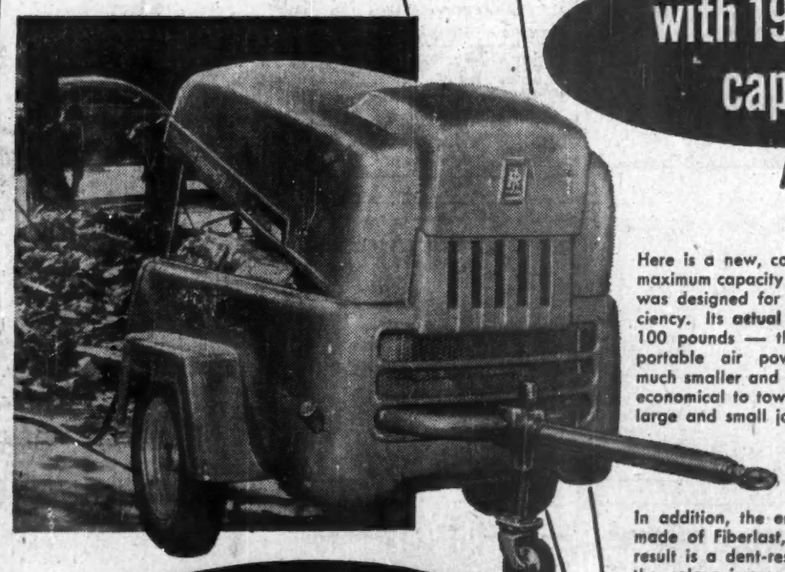

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MINING INVESTMENTS

Chromium Leases US Plant To Produce Ferro-Alloys

Through an American subsidiary, Pacific Northwest Alloys Inc., Chromium Mining & Smelting Corp. has leased a major portion of the government-owned magnesium plant at Spokane, Washington to make ferro-alloys. There is also an option-to-buy clause in the lease. Facilities can be re-converted on short notice to production of magnesium if required by the U. S. Government.

Rental will be $158,000 a year minimum plus 3% of gross sales up to $18 millions and 2% on gross sales above that figure.

The lease runs for 10 years with options to renew for two additional five-year periods. The company also has an option to purchase the plant at the end of three years on terms and conditions to be established by the government.

The new deal indicates that Chromium M. & S. has definite plans for expansion of the scale of U. S. operations.

Tungsten Corp. Deal

Tungsten Corp. of Canada, which holds 700,000 shares of Centre Lake Uranium Mines and was instrumental in securing Ventures participation in the project through Charlebois Lake Uranium has made a deal on a new property in Ontario's Bancroft uranium camp.

A prospecting party is to start work immediately on a 17-claim property acquired adjoining Centre Lake and Macassa Mines. Tungsten Corp. officials feel there is a possibility of the extension of Centre Lake uranium occurrences being picked up on their new ground. Ample finances are stated to be available for the work program now being drawn up.

• • •

Another Maniwaki Strike

Exploration in the Maniwaki area has located another strongly radioactive zone which appears the possible equal of anything in the area. The new showing located in Kensington Twp., is owned by Gatineau Uranium Prospectors and has been partially cleared off for a length of 200 ft. and up to 40 ft. in width.

Further clearing is being done using a bulldozer and Gordon Forbes, mining engineer, has been retained to make an examination. Blasting will be done to get fresh rock surface for sampling.

Duvex is another company reported with a showing—near Mercier dam. The company has a 1,400-acre property. The radioactive zone has been traced for 600 ft. and has been exposed for 300 ft. of this length. Widths of 25 to 30 ft. are reported.

E. F. KING

has been appointed a director, Dominion Textile Co.

Brilund Mines Cuban Plans Aimed At Manganese, Chrome

With a million tons of manganese ore said to be "reasonably certain" for manganese property of its Cuban Canadian Mining & Smelting Co. subsidiary in the Sigua district of Cuba, Brilund Mines, financed by Canadian and U. S. interests, has been working on the question of metallurgical processing and product marketing.

It is expected that a part of the million tons will be available as direct shipping ore and a preliminary agreement has been concluded with World Commerce Corp. of New York City for the purchase of ore under a two-year contract which calls for delivery of at least 20,000 tons of ore of a specified 44% minimum grade in the first year.

It is expected that an advance against ore shipments will be provided by World Commerce which is also interested in chrome ore production from another Cuban property where 14 men are working and where chrome "sacs" persist to depths of up to 65 ft. vertically.

The company has no less than 14 properties in the productive Cuban chrome area of which three are currently under development. A shaft is being sunk on one of these properties to secure information on structural conditions.

Bulk sampling is at present being done at the main manganese occurrence.

Brilund has at present a little over $500,000 in its treasury plus approximately $50,000 held by the subsidiary in Cuba.

The Cuban subsidiary is said to be assured a tax-free period of 10 years but profits would be subject to a 2% tax on transfer to Canada.

Inspiration's Beaucage Gets Further Drill News

Apparent extension of the main lake zone and a new zone on Great Manitou Island containing visible pyrochlore and possibly columbite are reported in Nipissing Lake drilling by Beaucage Mines, subsidiary of Inspiration Mining & Development Co.

Officials results of latest work are reported as follows:

"Diamond drilling on Newman Island has recently intersected what appears to be the well defined zone that was traced out under the lake last winter by diamond drilling at a depth of approximately 350 feet. This intersection was obtained in diamond drill hole No. 21 approximately 100 feet from the most westerly previous hole on the island. A further diamond drill is being added to this location immediately with the intention of tracing the zone across Newman Island toward Little Manitou Island.

Geiger Outlined

"A Geiger counter survey conducted on Great Manitou Island during the past two months has outlined a distinct radio active zone. This has been placed under attack by diamond drilling, and three holes drilled in the same plane have intersected a radio active zone containing visible pyrochlore and possibly columbite. Drilling on this zone is being pressed, and it is possible a further drill will be added very shortly. The mineralization on Great Manitou Island is associated with coarser crystallization than on Newman Island, which may help the extraction methods now being worked out.

"The drilling conducted during the spring on the Calder Island intersected some radio activity on the north end of the Island. This will be followed up later by diamond drilling when ice forms during the coming winter.

"Metallurgical research work is being conducted by six reputable research laboratories, two of which are working on large bulk samples."

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(By the Broker-Dealers' Ass'n of Ontario)

Approximate quotations, 3.30 p.m., June 22, subject to confirmation and change. An asterisk (*) indicates an increase in price, a dagger (†) a decrease in price.

	Bid	Ask		Bid	Ask
Abenakis	2¼	4	Mar Bird	6	8
Advance	5	7	Mary Ann	1¼	2¼
Alexander	4¼	5¼	Mate Yell	*6	7
Ama Kirk	4¼	6	McManus	5	7
Amax	72	77	McCuaig	3	5¼
Am-maque	2	4	Meta	*29	33
Anuwon	20	25	Miles RL	2¼	31
Arctic	2¼	3¼	Mindus	†28	33
Astral	68	70	Mistassini	3	4
Batiturst	68	73	Mt Kemo	12	13
Beacon	6	10	Mohawk	2¼	3¼
Beauriv	1¼	3	Murmac	5	7
Bi Ore	2	3	Nat New	9	11
Biroco	4	6	New Aug	4	5
Blondor	1	2	New Mal	2¼	3¼
B McDade	8	10	N Redwood	8	10
Bourlamq	2	4	N Waicoro	3	5
Braminco	14	18	Nickel Lk	11	14
Bright RL	1	3	Nickel O	300	350
Burley Por	3	3	Niptron	25	31
Camlaren	4	5	Norbeau	80	90
Camray	2	4	Norbec	13	17
Captain	5	7	Norcourt	3	5
Cassidy	3	3¼	Norford	4	6
Cent Man	10	12	Normar	3	4
Clix	23	25	Novel P	5	6
Cody Re	150	160	Obals '45	17	21
Columbier	1¼	2	Okiend	4¼	5¼
Columind	14	18	Orchan	142	44
Comstock	13	16	Orofino	6	8
Conecho	*14	18	Ortona	5	6
Con Copp	14¼	16	Pascalis	8	10
Cordell	15	23	Payne	3¼	5
Crack S	180	210	Pelangio	2¼	3¼
Craibe	6	8	Phelps	1¼	2¼
Croydon	2¼	4	Pole Star	†33	37
Deriak	3	4	Presdor	1	3
De Sant	3	5	Privateer	3	5
Destorada	4	6	Quejo	4	6
Doris	5	6	Quest	2	3
Dunvegan	18	20	Quyta	8	11
Durham	13	15	Rainville	*22	26
E Lund	5	7	Rand Mal	9	11
Echo Ind	2	3	Randona	5¼	6¼
El Bonan	5	7	Raymond	1¼	2
Elmac	3	4	Redruth	1¼	2
Fleming	5	7	Redcon	†21	24
Flicka	1¼	3	Rexspar	*90	100
Forty Fr	75	90	Rhyolite	2	3
Gan Cop	3	4	Richgroup	8	10
Gaspe	1500	1700	Rugged	3	5
Glencona	4	6	Russet	3¼	5
Goldmaq	42	46	S Michael	†42	47
Gov Gold	3	5	Salm Cön	25	30
Gr Chib	105	125	S Dufalt	3¼	5
Greenlee	4	6	Sheldon	12	14
Gui Por	40	45	Silv Arrow	4	6
Habilant	3	5	Silv Lake	1	2
Harker	3	4	Snow Lake	3	4
HG Young	55	65	Starlight	14	17
Hornfault	8	10	Sud Mid	*19	22
Hot Stone	2¼	3¼	S N Rim	25	28
Indepen	5	7	Sunbear	2¼	3¼
Insco	7	9	Tazin	*55	58
Iso	83	88	Vaud Duf	3	4
Jardun	85	88	Viking	15	20
Jerome	17	20	Wesley	†9	10
Jo Indian	15	25	West RL	2¼	3¼
Kamlac	13	15	West Wasa	14	17
Ken Bay	8	10	Y David	11	13
Kenda Per	6	8	Ynte vt	225	..
Kenogami	5	7	**OILS**		
Lar Add	3	4	Alberfield	27	30
Larum	43	46	Cdn Sup	825	875
La Salle	†14	24	Franco	50	60
Lk Expans	6	8	Major Oil	3	4
Lassie	7	9	Model	†62	67
Lennie	24	34	Nw Ranch	9	11
Lower Can	2	3	O Smokey	30	35
Lun Echo	9	11	Paige Pete	28	32
Lyndhurst	16	20	Rainbow	300	350
Mallen RL	3	4	Signet	18	22
Maree	†25	30	Vermn C	8	11
Maritime	95	100	West Lock	8	10

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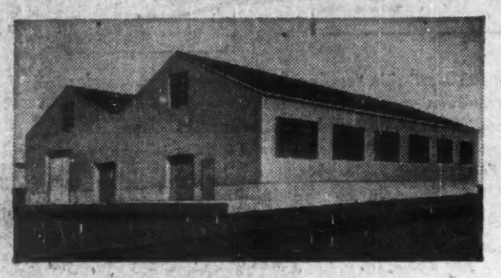

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LONDON CALLING — *By Adelphi*

The Merry Whirl Goes On, On

No Letup in Coronation Gaiety, New Spirit Of Confidence

LONDON — Life in London these days is like a celebration of Burns' birthday in Vancouver that never leaves off. The Coronation decorations and lights are still there, coaching parties arrive from everywhere and nowhere. Traffic in the centre is almost at a standstill, and the rain hardly ever stops.

As you know, it rained throughout the whole of Coronation Day, it rained when the Guards trooped the Color, and it rained most of the time through the Royal Ascot Race meeting.

The Ascot meeting is unlike anything else in the British calendar. Any man without a morning coat and grey topper might as well attend in a bathing suit. Then there is that impressive institution known as the Royal Enclosure, but this deserves a paragraph or more entirely on its merits.

• • •

They May Go To Abbey But Not to Ascot

The Ascot Race Course is part of the Royal Family's lands which stretch from Windsor Palace. It is historically known as The Heath, and everyone who comes to it is technically a guest of Her Majesty.

Different sovereigns have laid down rules of procedure but I believe it was the good Queen Victoria who decreed that no one could be admitted to the Royal Enclosure if he or she had been the guilty party in a divorce action.

Now this is very odd, because at the Coronation service in the Abbey I counted duchesses who had been married as often as three times. To admit an adulteress to the Abbey but not to allow her on the rails at Ascot seems somewhat odd. As your faithful chronicler I neither attack nor defend. I merely record what happens.

• • •

Financier Refused By Divorce Ruling

Anyone who desires to enter the Royal Enclosure has to apply to the Lord Chamberlain, the Duke of Norfolk. Among those who applied this year was Sir Bernard Docker, a financier.

Sir Bernard had always been admitted to the Royal Enclosure but this year the Duke of Norfolk replied that he could not grant permission and asked in the letter whether or not it was true that his wife, when she was Miss Blanketty Blank, was the guilty party in a certain divorce action.

This, of course, opens up all sorts of possibilities. A man may have been married to a woman for 30 years but suddenly the Lord Chamberlain demands to know whether she was not an adulteress in the case of Brown vs. Smith. At any rate, Sir Bernard sent the Duke's letter to one of the newspapers which promptly published the whole story.

• • •

Sin May Only Be Shown As Enticing

The English are never so silly as when they have to deal officially with morality. For example, in musical shows, chorus girls can be nude from the waist up providing they do not move. But if, feeling the draught, they should sneeze or even shiver then they are liable to be prosecuted.

On the other hand, a play like "Oscar Wilde" or "Children's Hour" showing the tragedy of unnatural vice cannot be shown in a public theatre. By the decree of English law, sin can only be shown in its enticing aspect and never in the truth of its tragedy. But I agree that these laws go back a long time and it is always difficult to blend tradition with common sense.

• • •

Toppers in the Air For Queen's Race Win

However, the Queen won one of the biggest races at Ascot and even the losers threw their grey toppers in the air. She is so amazingly popular that I really believe that those who backed the beaten horses were glad that she had won.

Yet there are many people who are gravely disturbed about the heavy strain upon the Queen. Her list of engagements from the Coronation to the end of July are relentless. Nor can she ever risk being photographed unless she is looking pleasant and is smiling. I have seen enough of it all to believe that she really loves the crowds and that she draws strength from their warmth and enthusiasm. Nevertheless, I am certain that the strain is enormous and that she ought to be given a rest.

Her husband, the Duke, has solved his problems by escaping in a helicopter and playing polo. I have seen him play, and you in Canada will understand my meaning when I state that he is too impetuous to be absolutely first class. He rides beautifully but instead of lying in wait and judging the next move he goes hell-for-leather after the ball.

• • •

The Row Over TV Commercial Plan

On the political front there is a great row about sponsored television. For better or worse the BBC in its purely radio days never allowed programs to be sponsored by advertisers.

However, with the advent of television, the Tory Government has decided that commercials, strictly under control, should be allowed to offer alternative programs to those produced by the BBC. Just to simplify matters Mr. Attlee, as Leader of the Opposition, has announced that when the Socialists come to power they will abolish the commercials.

As your London correspondent I am not called upon to say which point of view is right, but the "commercials" will have to move warily. The British do not want Sir Thomas Beecham's orchestra by permission of Beecham's Pills. Nor do they want Shakespeare's plays by permission of Players Cigarettes. My own feeling is that Churchill has made a blunder. However, it is too late for him to turn back.

• • •

'New' Socialist Policy Is Same Old Stuff

Incidentally the Labor Party has produced its new policy which is the old one with a few trimmings. More state control, more free health services, more mediocrity, more subsidies, and more restraints on private enterprise. They are like an old bear who cannot learn new dances.

Politics is always a difficult problem but it is hard to see a revival of Socialist fortune for some time. The Coronation of our young Queen has caused an enormous revival of Britain's spirit. Life here is vibrant, confident, exhilarating. That spirit may not be justified by hard facts, but nevertheless it exists.

• • •

The House of Commons is anxiously studying the news of Eden's health. Churchill is in great form but it is impossible for him to combine indefinitely the posts of Prime Minister and Foreign Secretary. If Eden should make a miraculous recovery he could regain his position overnight. But as I have often said in this column, Sir David Maxwell Fyfe, Harold Macmillan and Rab Butler are sitting on the steps of the throne and like Barkis, they are willin'.

At the recent Annual Meeting of the Pyrene Manufacturing Company, of Newark, New Jersey, Mr. H. S. Weed of Toronto was elected a Director. Mr. Weed has been actively interested in fire prevention for many years, as President and Managing Director of the Pyrene Manufacturing Company of Canada Limited, which position he continues to hold. *

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TOWNSHIP OF BRANTFORD, Ont., has sold $258,976 4¾% debentures dated Aug. 1, 1953, due 1954-73, to a syndicate comprising Equitable Securities of Canada and Canadian Bank of Commerce. Debentures are being offered through maturities 1959-73 at par to yield 4.75%. Proceeds for construction of new public school and addition to existing public school.

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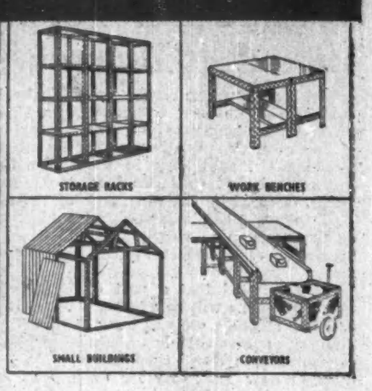

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Hamilton, London Best Bets For 'First' in Private TV

Private enterprise TV may be non-competitive in point of location at the moment anyway, but there was a faint crackle of rivalry in the airwaves this week.

Which city will win the prestige of being Canada's first commercial television centre?

At the turn of the week it looked like a neck-and-neck race between Hamilton and London, Ont., with a slight edge for London.

Hamilton's CHCH-TV, assigned to Channel 11, expects to be on the air by Christmas. CFPL-TV in London hopes to be telecasting on Channel 10 by the end of November.

Excluding CBC stations building or in operation now, eight private TV stations (at Windsor, Sudbury, Kingston and Kitchener, Ont.; Quebec City and Sherbrooke, Que.; Saint John, N.B., and Sydney, N.S.) have their licenses and are hustling to get on the air.

It won't be a rush job. TV transmitting equipment isn't in too plentiful supply, and last-minute changes of channels may have stalled matters still longer.

London's station has just signed a $200,000 contract with RCA Victor for a 10-kilowatt transmitter and other necessary equipment. RCA promised delivery by Aug. 31.

The lack of a station (or immediate prospects of one) isn't hindering Guelph, Ont., in its TV plans. Seven local businessmen, organized as Neighborhood Television Ltd., will "pipe" programs into Guelph homes. TV viewers will plug their receivers into wall sockets, picking up programs relayed into Guelph by cable. No station; no antennae; just the monthly bills to pay.

For the manufacturers and retailers of TV receivers, the week's news was welcome indeed. They anticipated a new flood of sales, and hoped for an indefinite yearly sales level of 300,000 sets.

RCA Victor examined the $22 million set sales in the Windsor district up to the end of 1952 and whooped with enthusiasm. The London area alone, they predicted, indicates a potential sales value of (a rather rosy) $50 millions for the next year and a half.

Even the more enthusiastic observers (who know that Canadian manufacturers made 220,000 sets, worth nearly $100 millions, in the year ended April 30) couldn't agree with RCA's figure for London.

Brighter Future Seen For Boy, 4 and Sister, 2

Father and Friend Protect Children!

Last winter, a young father told a Confederation Man: "Fred, you know how much is left of my $5,000 income after payments on my house ... food and clothing bills ... and all the other expenses. How much protection can I *afford* for my family?"

"A lot more than you think, Jim," replied the Confederation Man. "We have a plan that, on your salary, will provide for your family $10,000 in cash at death . . . and $100 every month until your daughter is 21. Then, they'll receive another $10,000. In the event of death after your daughter is 21 this plan provides $20,000 in cash. That's enough to provide a brighter future!" That's how a Confederation Life Man helped one father protect his family. He can help you too!

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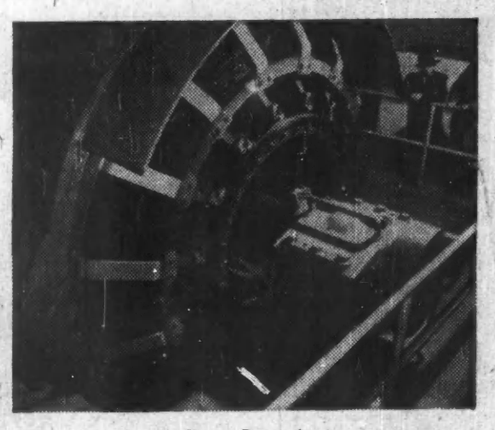
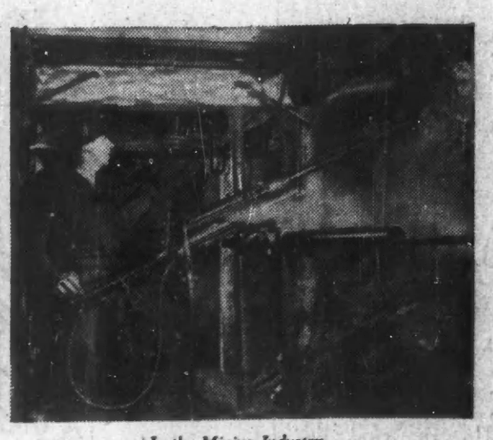


In Power Generation

In Machining Operations



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The Financial Post

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Chemicals: A Boom and A Boon

$200 Millions in New Plants . . . Bring Variety to Home, Industry

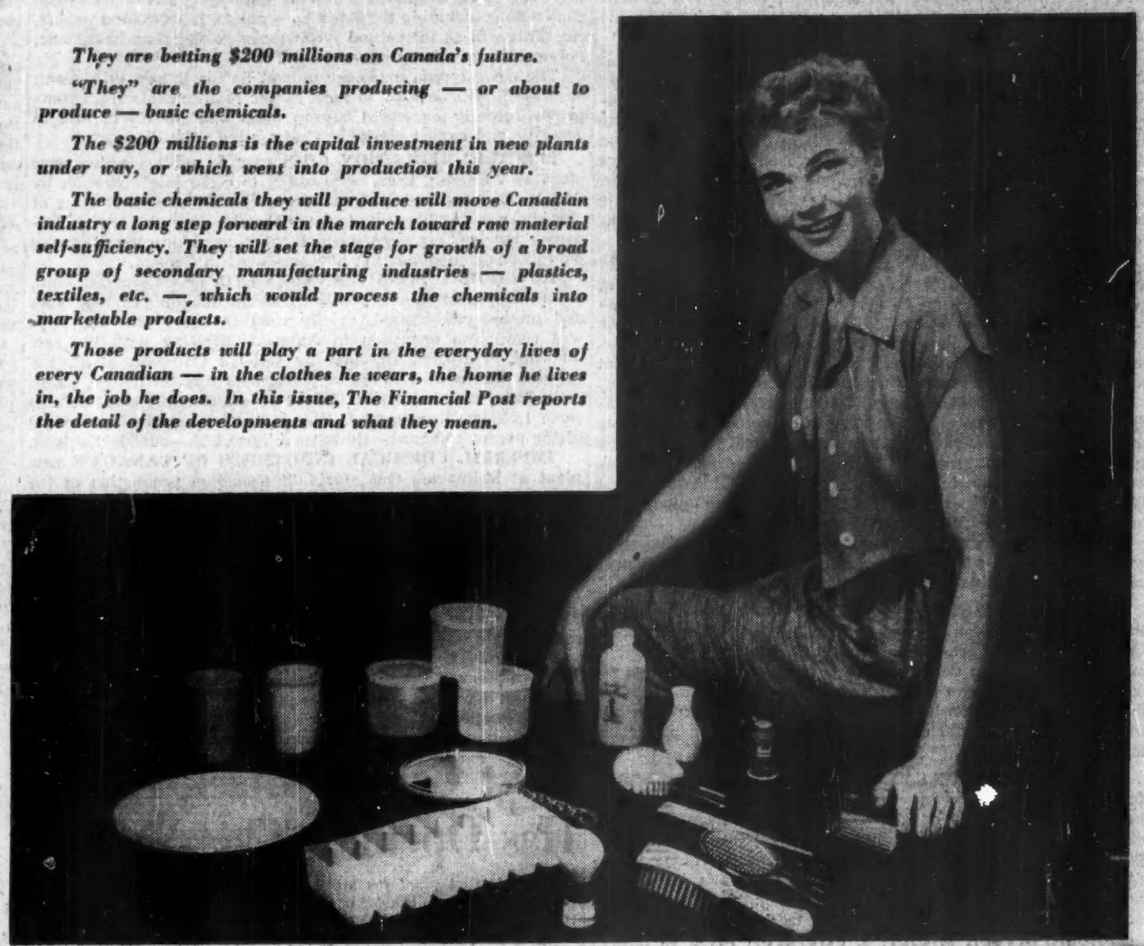
They are betting $200 millions on Canada's future.

"They" are the companies producing — or about to produce — basic chemicals.

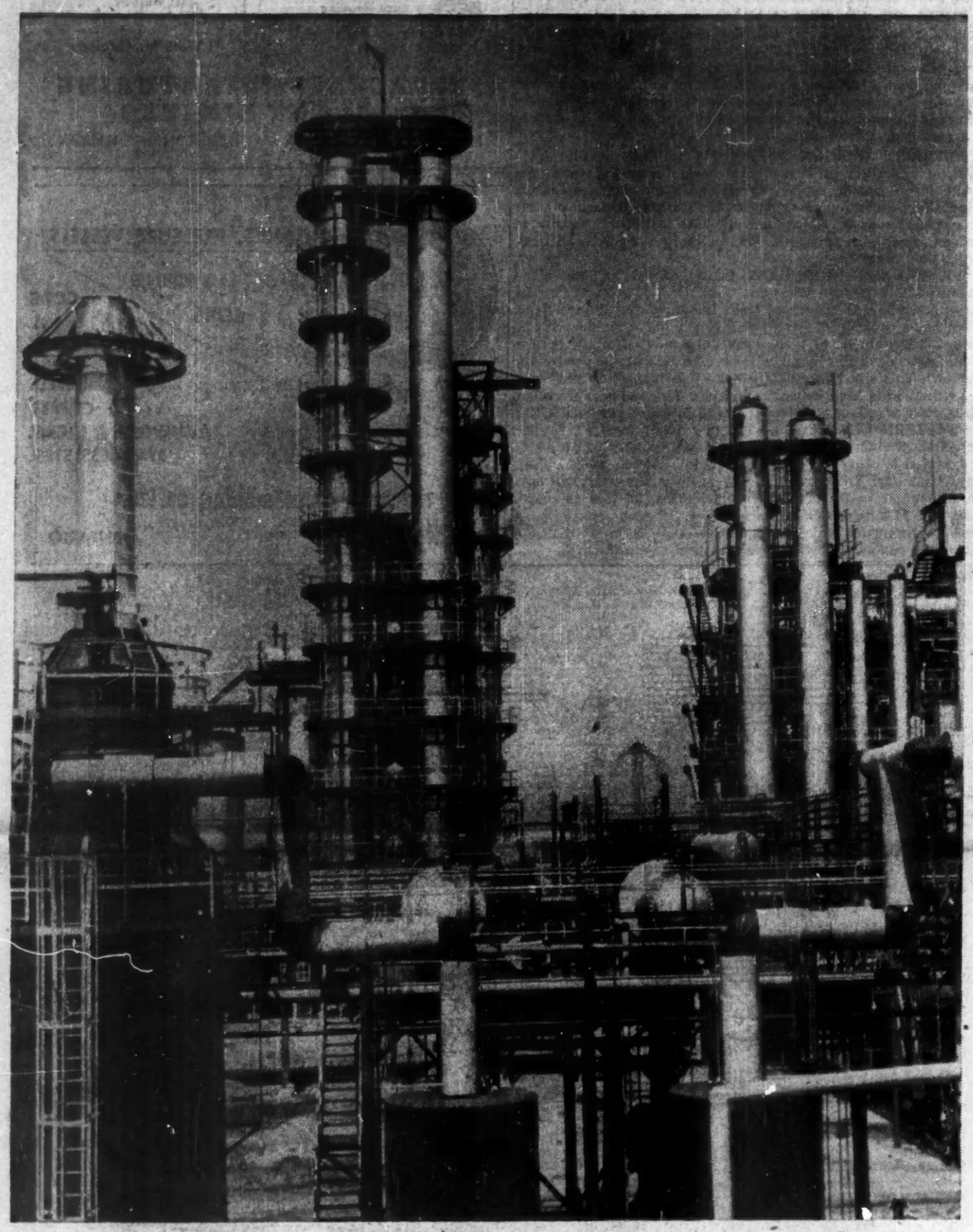
The $200 millions is the capital investment in new plants under way, or which went into production this year.

The basic chemicals they will produce will move Canadian industry a long step forward in the march toward raw material self-sufficiency. They will set the stage for growth of a broad group of secondary manufacturing industries — plastics, textiles, etc. —, which would process the chemicals into marketable products.

Those products will play a part in the everyday lives of every Canadian — in the clothes he wears, the home he lives in, the job he does. In this issue, The Financial Post reports the detail of the developments and what they mean.

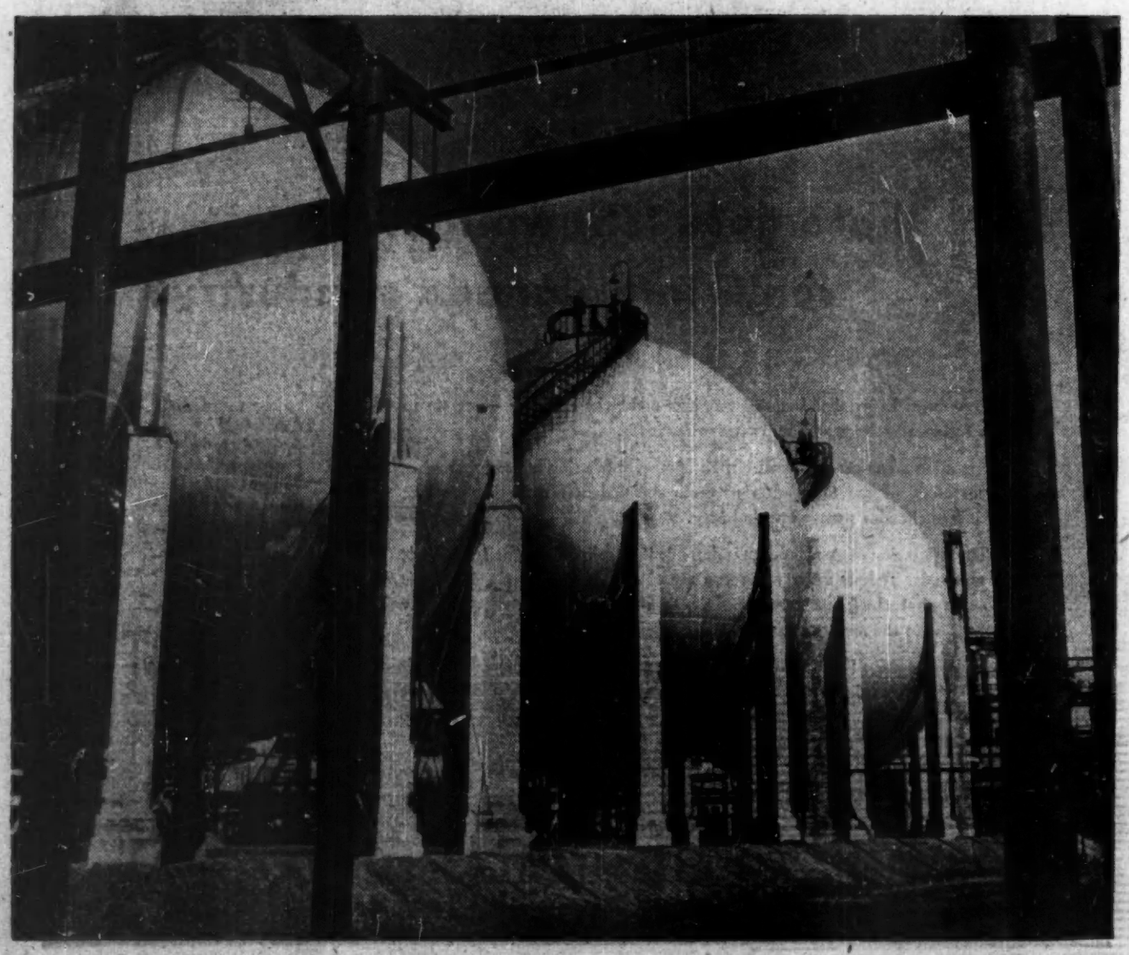


From Alberta's vast reserves of oil and gas will come polyethylene, the basic chemical for these "squeezable" cosmetic bottles, refrigerator dishes, and a host of other products for home, industry.



Tall fraction towers (top) of the new Styrene monomer plant of Dow Chemical of Canada at Sarnia symbolize the many petrochemical plants involved in Canada's fastest-growing business; storage spheres (bottom) dot the industrial plant of Polymer Corp., Canada's synthetic rubber giant.

Water mains and pipes — light, flexible, non-corrosive — are plastics' newest entry into the industrial field.



Strong, heat-resistant and nonconductors of electricity, phenolic molding compounds such as Bakelite get wide use.

Out of the chemist's test tube have come synthetic fibres, such as this dress of Celanese acetate.

The Companies, Expansion Programs In Chemical Boom

Here are the companies and their expansion programs in Canada's Chemical boom:

BAKELITE (CANADA) LTD.'S new $1 million Belleville plant for first Canadian production of formaldehyde—important in plastics—came into production early in April. Has a capacity of some 30 million lb. a year—about in line with current domestic demand—and Bakelite plans to use about half of lower initial production rate in own operations to make phenolic formaldehyde resins and urea formaldehyde products. Remainder of formaldehyde will be for sale to other consuming industries.

B. A.-SHAWINIGAN LTD.'S new petrochemical plant for first Canadian production of phenol and acetone came into production at Montreal East in May. Estimated to cost around $4 million, plant will have an ultimate capacity of some 13 million lb. per year of phenol and eight million lb. of acetone, coupled with production of some important by-products including acetophenone, mesityl oxide and alphamethylstyrene. Jointly owned by B. A. Oil and Shawinigan Chemicals, the plant will be the first in the world to produce phenol and acetone by the cumene process. Benzene and propylene are combined to produce the cumene.

CANADIAN CHEMICAL CO.'S new $63 million petrochemical plant at Edmonton for production of cellulose acetate, yarn and staple fibre and some dozen or more industrial chemicals is expected to be in complete operation this fall. The cellulose acetate division is expected in production next month, the yarn division later in the summer and the chemical branch by fall. The yarn and staple fibre will go chiefly to domestic market as will most of the chemicals. Company will have for export cellulose acetate and one or two of the higher price chemicals including pentaerythritol.

CANADIAN INDUSTRIES LTD. currently engaged in biggest expansion program in history. Biggest project is the new plant at Maitland, Ont., for first Canadian production of nylon intermediates. Estimated to cost over $20 millions, the plant will make Canada self-sufficient in hexamethylene diamine and adipic acid, the basic chemicals from which nylon is manufactured. Plant scheduled to go into production late this summer.

Company's new $13 millions Edmonton plant for first Canadian production of polyethylene flake is expected on stream late this fall. Initial production will be around 6,000 tons of flake a year. Chief raw material will be the ethane hydrocarbons from natural gas available in the area. Operations will require some 10 million cu. ft. of gas daily. Up to now all polyethylene flake has been imported from either U. S. or U. K.

A paint and varnish research and development laboratory was opened near Toronto and decision made to expand company's central research laboratory at McMasterville, Que.

CANADIAN RESINS & CHEMICAL'S new calender line, the third, began operation at company's plant in Shawinigan Falls, Que., last month to produce vinyl plastic film. Considered one of most modern on the Continent. New resins plant scheduled for completion this autumn is being constructed at Shawinigan Falls, designed to produce a whole new range of polyvinyl chloride and copolymer resins. Total cost of these two expansion projects is around $3 millions.

CABOT CARBON OF CANADA'S new $3 million Sarnia plant for first Canadian production of carbon blacks for use in rubber industry was officially opened this week. Will have a capacity of around 25 million lb. annually but will just get up to this rate gradually. Until now, all carbon blacks for use in rubber industry had to be imported from U. S. Last year's import bill amounted to $3.8 millions for some 60 million lb. Carbon will be obtained by burning petroleum oils or tars.

CONSOLIDATED MINING & SMELTING CO.'S $9 million fertilizer plant at Kimberley, B.C., will come into production early this fall. With a capacity of some 70,000 tons of ammonium phosphate annually—mostly for the rapidly growing Prairies market—the operation will be one of the most integrated on the Continent. Will bring in phosphate rock from own mine in Montana and react it with sulphuric acid made in its own plant from iron sulphide tailings from the big Trail smelter.

DOMINION TAR & CHEMICAL CO.'S new $12 million petrochemical plant for production of ethylene glycol and/or ethylene oxide went on stream last month at Montreal East. Having a capacity of some 30 million lb. annually, this is the second ethylene glycol plant in Canada. The other one is that of Dow Chemical at Sarnia.

At a new plant to be built in Toronto, company will turn out for first time in Canada tri-cresyl phosphates. Product is used in plasticizers and as an additive in gasoline.

Is actively considering plans for construction of an ammonia plant at Montreal East. With a capacity of some 150 tons daily the new plant would be a big factor in overcoming shortages in Eastern Canada.

Associated company, **Chemical Development of Canada,** has two projects under way for production of synthetic detergents other than the nonionic type and smaller projects for producing in Canada basic materials for production of synthetic detergents.

DOW CHEMICAL OF CANADA this month began construction of a $1 million plus synthetic latex unit at its Sarnia plant site. The latex is finding a rapidly expanding list of industrial applications including the latex-base paints, latex-coated papers, etc. This will be the second synthetic latex operation in Canada, Polymer Corp. nearby is also in the field.

The new styrene monomer unit at Sarnia is now on stream; production will be used to meet larger requirements from company's recently expanded Styron units and for direct sale to domestic and export markets. Cost around $4 millions.

ELECTRIC REDUCTION CO.'S new $5 million phosphorus plant at Varennes, Que., is expected to come into operation by Oct. 1. The soap and synthetic detergent market—chief users of phosphorus—has been expanding steadily since the war. Company's development department is working on processes to make phosphorus compounds not now produced in Canada.

HOWARDS & SONS (CANADA) LTD. new Cornwall, Ont., plant for production of specialty chemicals including cyclohexanol and methylcyclohexanol, chiefly used in the textile industry will come into operation in August. Starting with the raw material, hydrogen, supplied by C-I-L's Cornwall plant, the process ends with a range of plasticizers used in textile, paint, cellophane, etc., industries. Initial production will be at rate of some 1,250,000 lb. annually. This is first manufacturing venture of the parent company—Howards & Sons Ltd.—outside England.

IMPERIAL CHEMICAL INDUSTRIES OF CANADA'S new plant at Millhaven, Ont., for first Canadian production of the man-made textile fibre "Terylene" is already under way. To cost around $20 millions, initial capacity will be some 11 million lb. Pilot plant with capacity of 700,000 lb. of Terylene will be in operation by middle of next year; the main plant around mid-1955. Chief raw material will be para-xylene — a petroleum material. At first this will have to be imported but later may be made available in this country. Company may buy it first in intermediate stage as di-methyl teraphthalate.

MONSANTO CANADA, LTD., will build a $400,000 petroleum additive plant at Ville La Salle, Que. Several types of detergents and inhibitor additives for blending with lube oils and certain special compounds for gear lubricants will be synthesized at new plant. Along with new plant of Lubrizol, also going into the additive business, this represents another new field for chemistry in Canada. Market well over $1 million annually.

NORANDA MINES has recently started construction of its $4 million plant at Niagara Falls, Ont. to produce elemental sulphur, sulphur dioxide gas and high-grade iron sinter. Cheif raw material will be pyrite concentrate from company's own mine at Noranda, Que. This will be treated at rate of around 350 tons a day. Located alongside plant of North American Cyanamid, the sulphur dioxide gas will go by pipeline to the Cyanamid company for use in manufacture of sulphuric acid. Plant's gross savings of sulphur imports will run around 54,000 tons a year. Some 75,000 tons of sinter will be made available annually to steel industry. Project is expected to be completed by July, 1954. If process lives up to advance indications Noranda will build more such plants.

POLYMER CORP.'S new rubber research laboratory at Sarnia plant site is now completed and special equipment is currently being installed. Estimated to cost around $1¼ millions, the new "lab" will be one of the most modern on the continent. Another steam boiler (sixth) has been added at the steam power plant.

SHELL OIL CO. OF CANADA'S new $3-$4 million petrochemical plant at Montreal East for production of acetone and first Canadian production of isopropyl alcohol went on stream early in April. Combined capacity is 20 million lb. (12 million isopropyl and 8 million acetone). There will be considerable flexibility in output between these two, production being varied according to market. Production of other associated chemicals is expected at a later date.

SHERRITT GORDON MINES' $17 million metallurgical-chemical operation at Fort Saskatchewan near Edmonton for production of nickel, copper, cobalt and ammonium sulphate is going along according to schedule. Company expects to market some 65,000 tons of ammonium sulphate fertilizer annually as well as some extra ammonia. Will be marketed chiefly in U. S. West Coast area.

ST. MAURICE CHEMICALS, jointly owned by Shawinigan Chemicals and Heyden Chemical Corp. (N.Y.), brought its new $3 million plant at Varennes, Que., into first operation in May. Plant has a capacity of some 30 million lb. of formaldehyde and some 2-3 million lb. of pentaerythritol annually. A big portion of the formaldehyde output will be used in manufacture of the "penta." This will be first Canadian production of "penta" used in production of high industrial finishes. Later in year Canadian Chemical Co.'s plant at Edmonton will also turn out "penta."

WESTERN CHEMICALS LTD. new plant for first western Canadian production of chlorine, caustic soda and muriatic acid is expected to come into production by late summer at its Duvernay, Alta., site. To cost around $3.5 millions, the plant will have an ultimate capacity of 20 tons of chlorine, 24 tons of caustic soda and 10 tons of muriatic acid a day. Plant is self-contained unit, obtaining its basic raw material—salt—from wells drilled under the site and its power from natural gas in the area.

First Carbon Black Plant Has Opening This Week

Canada's first plant for manufacture of carbon black for use in the rubber industry is being officially opened this week at Sarnia, Ont. Owned by Cabot Carbon of Canada—Canadian subsidiary of Godfrey L. Cabot, Inc., Boston, one of the world's largest manufacturers of carbon black—the plant will cost around $3 millions and have an annual capacity of over 25 million lb.

Up until now, Canada's supply of this material has all been imported from U. S.—the 1952 import bill for some 60 million lb. totaled $3.8 millions. Turning out two of the more popular grades of carbon black used chiefly in tire and some mechanical goods manufacture, the new plant will render Canada much less vulnerable on the supply front, particularly in time of emergency.

The carbon black will be made by burning petroleum oils or tars in a special type furnace with insufficient oxygen then collecting the resultant carbon particles by means of bag filters in large collection towers.

Carbon black is what gives auto tires and other rubber products the major share of their abrasion resistance, also their black color. As the rubber industry has become more and more specialized turning out products calling for special properties for special market applications, so the carbon black makers have kept pace with a range of new "blacks" each offering special qualities.

There is a special black, for instance, that helps supply high abrasion resistance to the treads of tires; another that imparts good flexing properties combined with strength to tire carcasses, industrial beltings; another provides high electrical conductivity for certain electrical applications. To build into these blacks just the correct qualities requires the right petroleum raw material and a set of perfectly controlled burning and collection conditions.

Although most of the raw material petroleum supplies are at present being imported, it is expected that in the future bulk of requirements will be met from nearby refineries. Built at Sarnia to be near source of raw materials, it is expected that the plant may become an important supplier to the Crown-owned Polymer Corp. plant, Canada's only manufacturer of synthetic rubber.

The growth of the synthetic rubber industry during the war changed the whole carbon black picture. Not only does the synthetic rubber require more carbon black per pound but also demands new and more exacting qualities in carbon blacks. This, plus the rising price trend of natural gas in U. S., combined to bring about a major change in type of raw material used.

New Raw Material

Up until that time almost all carbon black was recovered from the burning of natural gas. But officials now claim that their products produced from the burning of liquid hydrocarbons—in form of heavy oils or tars—imparts greater road wear to a tire.

At one time the Cabot interests studied the economics of making carbon black in Alberta from the plentiful supplies of natural gas in the area but the project was dropped as uneconomical, chiefly because of the long rail haul to big eastern markets.

Although many industries use carbon black, e.g. manufacturers of inks, paints, floor tiling, etc., approximately 90% goes to the rubber industry. Production at Cabot Carbon's new plant will be on a reduced scale at first but will be expanded as market grows.

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This Is Big Year In Petrochemicals

10 Plants Coming 'On Stream' With Vast Range Of Products

By W. L. DACK

This is the big year in Canada when petrochemicals becomes more than just a glamorous name; when the vague promise of a series of strangely shaped plants springing up across Canada is at last translated into visible production.

Phenol, isopropyl alcohol, pentaerythritol, polyethylene—these are some of the unfamiliar products of a still unfamiliar industry. They will make their market bow to Canadians in dozens of unrecognized forms, in paints, plastics, synthetic detergents, fertilizers, explosives, pharmaceuticals, etc.

The 10 petrochemical plants coming "on stream" this year will have more impact on Canada's economy than any other group of associated plants ever brought into production in this country.

They will not only mean savings of millions of import dollars annually, but in time will bring about the growth of a group of secondary industries based on the plentiful supply of raw materials.

The plants represent a capital outlay of around $160 millions.

There is no record of any chemical industry in any country going on such a proportionate spending spree. Marketwise, Canada is still small. Almost every one of the new plants is designed with an installed capacity of looking after the entire domestic demand for its product; a couple have capacity far beyond Canadian demand and require export outlets right from the start to be economic.

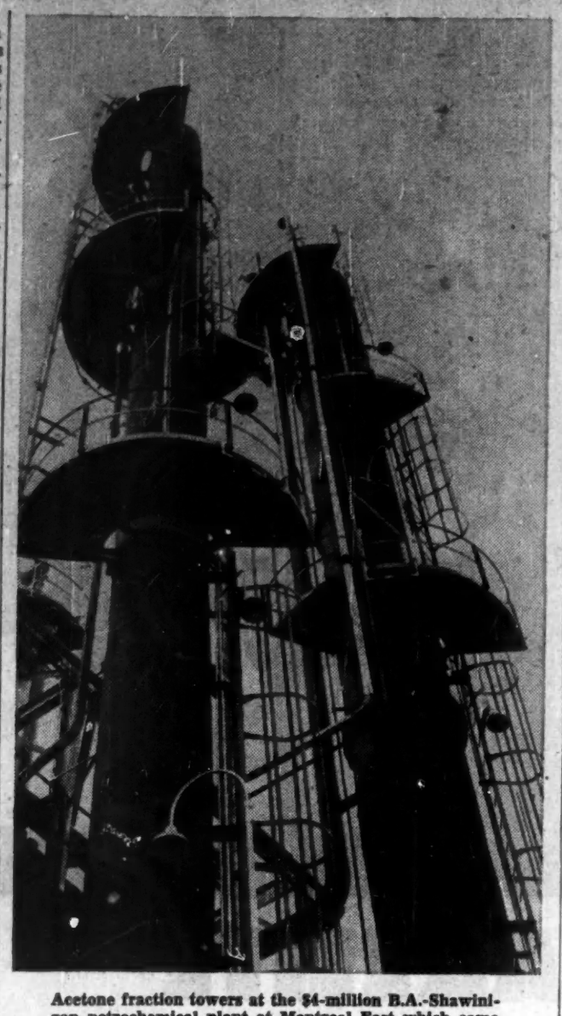
To have to share the home market at this stage with even one or two other producers—foreign or domestic—can mean operating in the red. Obviously the petrochemical people are a little concerned about the next couple of years. The greatly expanded U. S. chemical industry is already knocking at our market doors with surplus production and disturbingly competitive prices. Such pre-war chemical giants as Germany and Belgium are out gunning for recovery of all their markets with price lists that in some cases are making our chemical officials wince.

Marketing of what will almost certainly be surplus supplies of formaldehyde, acetone, pentaerythritol, for instance, will present considerable initial headaches.

Little Tariff Help

Relatively low, or no tariffs at all, provide little protection for the lustily growing industry. But the planners went into the expansion program fully alive to the problems. They aimed their sights a little farther away than the first two years. With a Canada so freely endowed with scarce raw materials and industry on an unprecedented expansion and diversification march, the gamble seemed to weigh heavily on the winning side.

Just 10 years ago, the petrochemical industry was born at Sarnia with a $45 million outlay for the crown-owned Polymer Corp., still the only synthetic rubber producer in the British Empire. Today chemical plants operating or under construction add up to a total outlay of some $260 millions. Still other plants are in the talking stage, like the ammonia plant for Montreal East, and the tetraethyl lead plant, in Eastern Canada to supply the bulk of the petroleum industry's requirements of this all-important chemical.



Acetone fraction towers at the $4-million B.A.-Shawinigan petrochemical plant at Montreal East which came into operation last month.

Life blood of the petrochemical industry is hydrocarbons—molecular combinations of hydrogen and carbon atoms. Although present in all nature it is only in petroleum that hydrocarbons are concentrated enough to permit economic extraction.

Natural and petroleum gases carry within their structure the potentiality of making many organic chemicals. At the moment they are producing some 40% of all true organic chemicals consumed in the free world. These chemicals in turn are basic raw materials for dozens of end products such as anti-freeze, alcohols, ammonia, synthetic rubbers, synthetic fibres, plastics, synthetic detergents, explosives, etc.

New Refinery Backed

Up until recently, bulk of the world's hydrocarbon gases came as a by-product from cracking of petroleum for gasoline. But the petrochemical industry has been expanding to such an extent that it became necessary to take certain petroleum fractions and crack them specifically for the gaseous by-product. Growth of Canada's petrochemical industry would never have been possible without the unprecedented post-war expansion in refining capacity — jumped some 70% — this has made available a greatly expanded volume of by-product gases to the young petrochemical industry.

In some cases, the oil companies are creating new divisions —or associated companies—and going directly into the chemical business. That is the case with both Shell Oil Co. of Canada and British American Oil Co. — the latter in conjunction with Shawinigan Chemicals Co.

In other cases, the oil companies have preferred to remain essentially in the refining business and are selling their refinery gases as feedstock to petrochemical companies in the area. (Imperial Oil, McColl-Frontenac, Canadian Oil Co.).

Such a keen demand has sprung up for these refinery gases, which at one time were burned under refinery boilers as a fuel or flared away in the air, that multimillion-dollar petrochemical firms are flocking to refining centres to be near the source of the magic raw materials.

Thus the big refining centres —Sarnia, Montreal and Edmonton—have become the big petrochemical centres. In the case of Edmonton the supply of low-priced natural gas has been a big added incentive. One company is using the gas as a source of its raw material, another is using it as a fuel under its boilers.

The reasons behind the decision to build a new $13 million polyethylene plant (Canadian Industries Ltd., at Edmonton), rather than a big eastern refinery centre, afford a good example of how officials in this fast-moving industry plan ahead. Since ethylene—the main raw material requirement—can be obtained from all of the petroleum hydrocarbons, whether liquid or gaseous, considerable thought was given to location of a plant in Eastern Canada close to the large refining centres.

Such a location would put the plant some 2,500 miles closer to the big polyethylene market, but since the raw material, ethylene, is merely a by-product with the refiner whose chief concern is output of gasoline, there was no guarantee of continuity of supply beyond a few years.

C-I-L decided the advantages of production in the East close to markets were outweighed by the advantage of location in Alberta, where additional freight charges could be offset by a virtually unlimited supply of raw materials at lower costs and with much lower fuel costs as well.

Giant at Edmonton

Canadian Chemical Co.'s $63 million combined textile-chemical project nearing completion at Edmonton presented a little more complex problem. One basic raw material — alpha-pulp — was to come from an associated company's B.C. mill. The other raw material—the petroleum hydrocarbons—could come from refinery or natural gas.

The big markets for the acetate fibre and the industrial chemicals to be turned out were in Eastern Canada. Freight rates at the same time both in raw materials and finished products were a very big consideration in the entire project. Company officials decided Edmonton offered the best combination of long term advantages.

Not only were there plentiful supplies of refinery gases but also lots of natural gas for use as a fuel under the company's steam boilers to produce electricity.

It was fairly obvious that some of the lower priced chemical products would not stand the long rail haul to Eastern Canada and that export of at least one of the higher priced chemicals—pentaerythritol, and some of the cellulose acetates—would be necessary.

Thus it goes. Each company has been faced with its own set of considerations in deciding locations of its plant. Some decisions are difficult, others relatively simple as in the case of BA-Shawinigan and Shell Oil Co. of Canada. In both these latter cases availability of refinery gases from company's own refineries in the area, plus nearness to the big industrial market for their products, made Montreal East the logical site.

Where are the next most likely sites for Canadian petrochemical developments? Already supplies of refinery gases are growing tight at both Montreal and Sarnia. Oil pipelines may supply the answer. Vancouver's refining capacity has been boosted to around 35,000-40,000 bbls. a day coinciding with completion this summer of Trans-Mountain oil pipeline from Edmonton. Availability of refinery gases and a rapidly expanding west coast market will be the major conditions prompting construction of one or two petrochemical plants near the city.

With one expanded refinery in Winnipeg and another expansion program under way plentiful supplies of refinery gases will be available. Closeness to the big U. S. midwest farming area may make Winnipeg the logical site for a petrochemical plant to turn out ammonia fertilizer material.

More For Alberta

Once the Alberta Government gives its approval to large-scale exports of natural gas out of the province for eastern markets, there are almost certain to be some petrochemical units go up in the Pincher Creek gas fields in Southern Alberta. Sulphur, butanes, natural gasoline, etc., are likely to be extracted from special plants before the gas starts on its long eastward journey.

Here are some of the major projects under way across Canada:

Canadian Chemical Co.'s $63 million petrochemical plant on the eastern outskirts of Edmonton expected to be in complete operation by late fall. With starting raw materials of high alpha wood pulp from an associated B.C. company and petroleum gases, the company will end up with a long list of organic chemicals—some of them never produced before in this country—and cellulose acetate and acetate staple fibre and filament yarns. The cellulose acetate division is expected to come into operation early next month. The yarn division later in the summer and the chemical division by fall.

Operations will be divided into three separate divisions: In the first or chemical plant, the organic chemicals will be produced; in the second, acetic acid which will be reacted with wood pulp to form cellulose acetates; and in the third acetone and cellulose acetate will be used to manufacture acetate staple fibre filament yarns.

Ajax Petroleums Ltd. has an agreement to supply Canadian Chemical Co. with natural gas requirements for a period of 20 years at rates not to exceed 50 million cubic ft. daily. It is estimated that company requirements would be about 35 million cubic ft. a day. The gas will be used as a fuel to produce electricity. The hydrocarbon raw materials, will come from refineries in the area.

Although the process to be used will be based on that of the parent company's plant at Bishop, Texas, there have been some important improvements incorporated into the Edmonton operations. One of the basic chemicals to be produced will be formaldehyde, some of which will be sold to the west coast market for adhesives for the plywood trade the rest will be reacted with acetaldehyde to form pentaerythritol, essential raw material for high quality industrial finishes. Other chemicals for sale will be methanol, acetone, propylene glycol, etc.

Canadian Industries Ltd. new $13 million plant for production of polyethylene, one of the most versatile plastics known, expected to come into production this October, at an expected rate of about 6,000 tons of flake a year. It is expected that this output rate will be raised steadily.

Up to now our polyethylene flake has been imported from either the U. S. or the U. K. The plant operations will require about 10 million cu. ft. of natural gas a day, 8 million gallons of water and 35,000 kilowatt hours of electricity. In the process ethane will be separated from the natural gas stream and cracked into ethylene. Pure ethylene gas will be compressed to more than 25 lbs. per square inch. Some of the ethylene will polymerize to form liquid polyethylene. This will be solidified by cooling and cut into cubes approximately one eighth inch to

(Continued on page 32)

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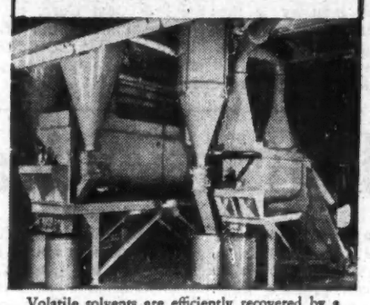

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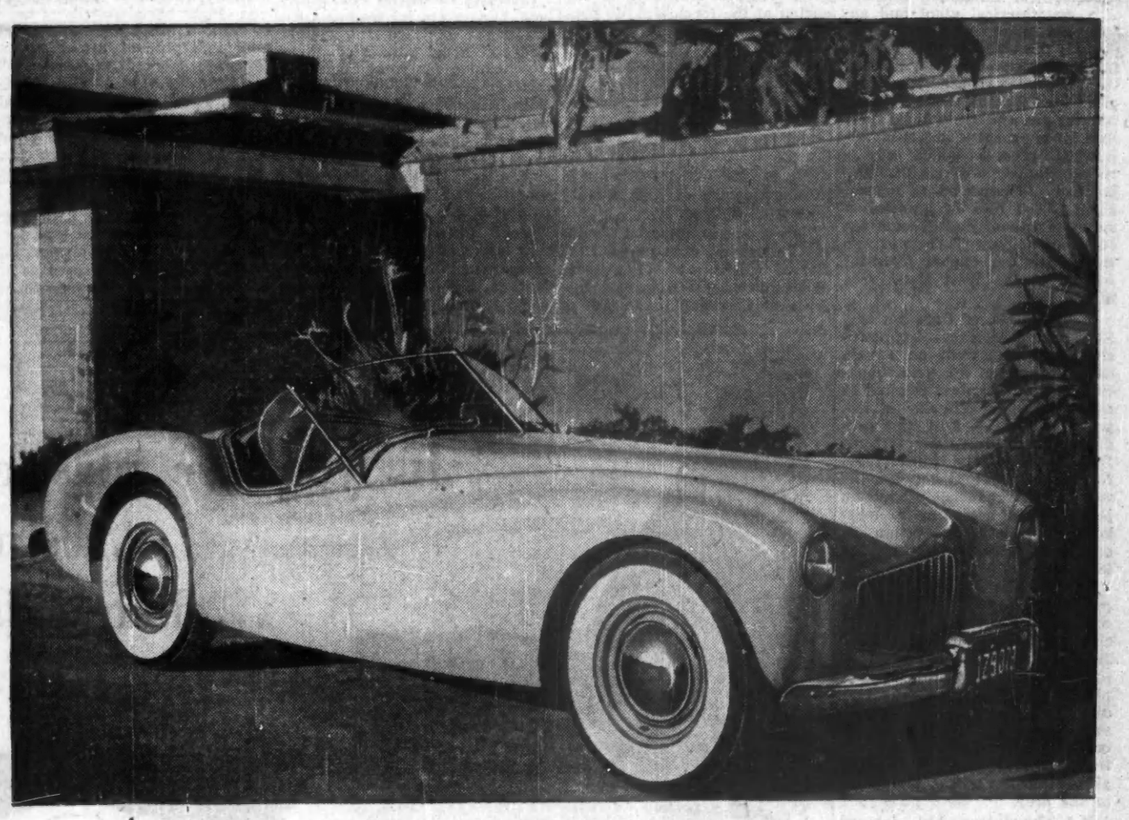

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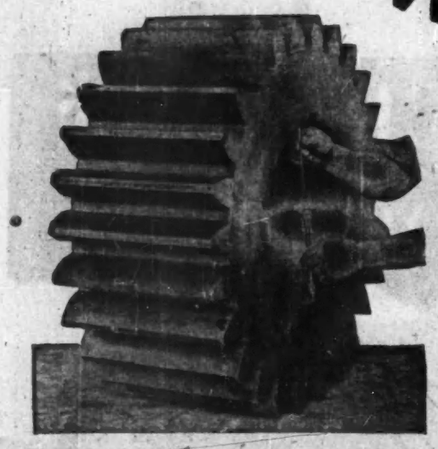

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Temporary easing in the world's sulphur supply situation hasn't taken any of the steam out of Canada's postwar move to supply a major portion of her own requirements.

The recent 20% hike in price of elemental sulphur in U. S. is seen as but a reflection of the steady upward demand pressure on available supplies; the rising cost of finding important new sulphur deposits. There is general agreement in the Canadian chemical industry that secondary recovery of sulphur—from waste smelter fumes, base metal tailings, pyrites, natural gas—will gradually have to supply more and more of the rapidly rising sulphur requirements in this country.

Canada is particularly well situated for potential supplies of sulphur in secondary forms. There is enough potential sulphur in the big sour gas fields in Alberta—Jumping Pound, Okotoks, Pincher Creek, etc.—to meet the entire Canadian demand for many years.

But there is one hitch—it's in the wrong place as far as markets are concerned. Even if the sulphur were free it would scarcely be able to lay down competitively in eastern Canadian markets because of the long rail haul.

Although prairie demand is steadily increasing there will have to be establishment of considerably more sulphur-consuming industries, e.g. fertilizer, insecticide, pulp and paper, etc., to make sulphur recovery there profitable.

Once a west-east pipeline is constructed for shipment of natural gas eastward in large quantities and the sulphur dioxide content has to be stripped from the gas, some important consuming industries might be attracted to the site of cheap sulphur supplies.

Pyrites Recovery

Recovery from pyrites appears the best answer for eastern industry. There are tremendous supplies of pyrites in Ontario and Quebec and the recent sizeable hike in sulphur and sulphuric acid prices pushes many of these deposits a big step closer to the profitable operations stage.

In many cases, concentrating of the pyrites at the recovery site and transporting the doubly valuable concentrates is the measure of difference between a profitable and nonprofitable operation.

But when the pyrites can also be treated for recovery of valuable iron ore the project is almost assured.

This is the case in one of the most promising secondary recoveries of sulphur in the world—that of Noranda Mines at Niagara Falls, Ont. Sulphur interests in many countries have their eyes closely trained on the Welland project.

In a $4 million plant already under construction, Noranda will treat some 350 tons daily of pyrite concentrate shipped by rail from Noranda, Que. The plant is situated alongside the North American Cyanamid chemical plant so that a ready market exists for the sulphur dioxide gas that will be produced in the processing of the pyrites.

The chemical plant will be able to use the gas in production of sulphuric acid. All in all, gross savings in sulphur imports into Canada will amount to some 54,000 tons annually.

In the process, some 75,000 tons of high-grade iron sinter will be made available annually to the Canadian steel industry.

Key to the successful operation of such a project is plentiful supplies of high-grade pyrites and a relatively close market for the sulphur dioxide gas. There is little doubt that if the process lives up to pilot plant expectations other plants using the same process will be built in Canada and elsewhere.

Liquid Production

Canadian Industries Ltd. is producing some 90,000 tons of liquid sulphur dioxide annually by direct compression and cooling of strong gas from International Nickel Co.'s flash smelting process at Copper Cliff, Ont. Most of the sulphur dioxide will be used by sulphite paper mills in Ontario and Quebec.

Consolidated Mining & Smelting Co.'s new sulphuric acid plant at Kimberley, B.C., based on iron pyrite tailings will produce some 300 tons daily H_2SO_4. All of this will be used in company's new chemical fertilizer plant which will start producing some 70,000 tons annually of ammonium sulphate.

The new additions brought total capacity at year end to about 900,000 tons of 100% acid. Production in 1952 amounted to 803,700 tons, off 2% from the previous year.

The sales trend of sulphuric acid has always been accepted as one of the best barometers of an industry's health since it is being used directly or indirectly in practically every industrial process. It is widely used in the chemical industry in preparation of many of the other basic chemicals which in turn enter into manufacture of hundreds of end products.

Fertilizer Biggest User

The fertilizer industry is the biggest single user of the acid in Canada and with a steadily increasing demand for chemical fertilizers in this country it is certain that requirements from this source will keep expanding.

One of the other chief users of acid is the textile industry in processing of rayon fibres. Any sizeable change in operating tempo of this branch of the textile industry is immediately reflected in acid sales.

The steel industry is a major user of acid in its pickling process. The acid helps remove the troublesome scale that usually forms in certain processing steps.

The oil refining industry is another large user of acid but the current trend toward installation of modern, catalytic cracking units has reduced demand considerably. One of the largest refiners, for instance, which used to consume 12,000 tons annually, reduced his consumption rate progressively to 3,600 tons and now practically nil.

Other big users include the pulp and paper industry, explosives, pigment manufacture, rubber industry. A price increase is looked for here shortly. Since one lb. of sulphur produces roughly three lb. of acid the boost could be around 8-10% (based on the 20% rise in elemental sulphur price).

The pulp and paper industry is still the biggest user of sulphur, consuming some 50-60% of total imports which are used in sulphur dioxide form.

Nine acid plants were operated during the year by six companies: Consodidated Mining & Smelting Co. of Canada at Trail, B.C.; Canadian Industries Ltd., at Copper Cliff and Hamilton, Ont.; Nichols Chemical Co., at Sulphide, Ont., and Valleyfield, Que., and Barnet in B.C.; Dominion Steel & Coal Corp. at Sydney, N.S.; Aluminum Co. of Canada at Arvida, Que.; and North American Cyanamid, Ltd., Niagara Falls, Ont.

This Is Big Year In Petrochemicals

(Continued from page 31)

the side. The flake will be shipped to Shawinigan Falls for fabrication. Market outlets for this popular plastic is expanding rapidly.

Sherritt-Gordon Mines $17 million metallurgical-chemical project is going along on schedule and is expected to be in operation late this year. The refinery situated at Fort Saskatchewan, Alberta, near Edmonton consists of a metallurgical plant and an ammonia plant. The ammonia plant is the petrochemical end of this combined operation, in that the basic material used is natural gas. The ammonia derived from natural gas and air will be used as a leaching agent in the metallurgical process which covers nickel, copper and cobalt. The company is expected to market some 65,000 tons of ammonium sulphate annually plus some excess ammonia. This will go mainly to the export fertilizer market in the West Coast area of the U. S.

Shell Oil Co. of Canada's new $3-$4 million Montreal East petrochemical plant went on stream early in April of this year. Capacity of the new plant is some 20 million pounds annually of isopropyl alcohol — first time produced in Canada — and acetone. But there will be considerable flexibility in output between the two chief products, production being varied according to market conditions. Production of other chemicals is likely at a later date.

Isopropyl is important in the production of pharmaceuticals, cosmetics; in making lacquers, in cleaning compounds, plastics, etc. Acetone is a major and basic solvent used to extract chlorophyl, waxes and fats and in production of other products as varied as rayon, cordite and nail polish. The hydrocarbon raw materials are available in refinery gases from the company refinery in the area.

B.A.-Shawinigan Ltd. (owned jointly by B.A. Oil and Shawinigan Chemicals Ltd.) $4 million petrochemical plant at Montreal East for production of phenol and acetone and associated by-products came into operation last month. Basic raw materials are cumene, produced by a special unit at B.A.'s refinery, and benzene. When ultimate production rates are reached the new plant will produce some 13 million lbs. per year of phenol and about 8 million lbs. of acetone, coupled with the production of some important by-products—alphamethylstyrene, acetophenene, mesityl oxide, etc.

Phenol as a chemical is used principally in the production of synthetic resins and adhesive glues. When combined with formaldehyde, it forms the basis of phenolic resin plastic. Phenol is also used as an ingredient in 2, 4-D, synthetic detergents, pharmaceutical preparations, etc. The plant is designed to make Canada self-sufficient in phenol.

Dominion Tar & Chemical Co.'s new Montreal East petrochemical plant went on stream early in May. Costing some $12 millions it has a productive capacity of around 30 million lbs. of ethylene glycol used chiefly in antifreeze. It can also produce ethylene oxide which could be used in manufacture of synthetic detergents. Company officials are looking into the possibility of manufacture of other associated products, including ammonia.

St. Maurice Chemicals (jointly owned by Shawinigan Chemicals and Heyden Chemical Corp., New York) brought its new $3 million plant at Verennes, Quebec, into production last month. Plant will have a capacity of some 30 million lbs. of formaldehyde and some 2-3 million lbs. of pentaerythritol annually. A big portion of the formaldehyde production will be used in manufacture of "penta." This will be Canada's first production of the high priced chemical—later in the year Canadian Chemical Co. will be producing a considerably larger amount at its new Edmonton plant.

Big market outlet for penta is in manufacture of high quality industrial finishes.

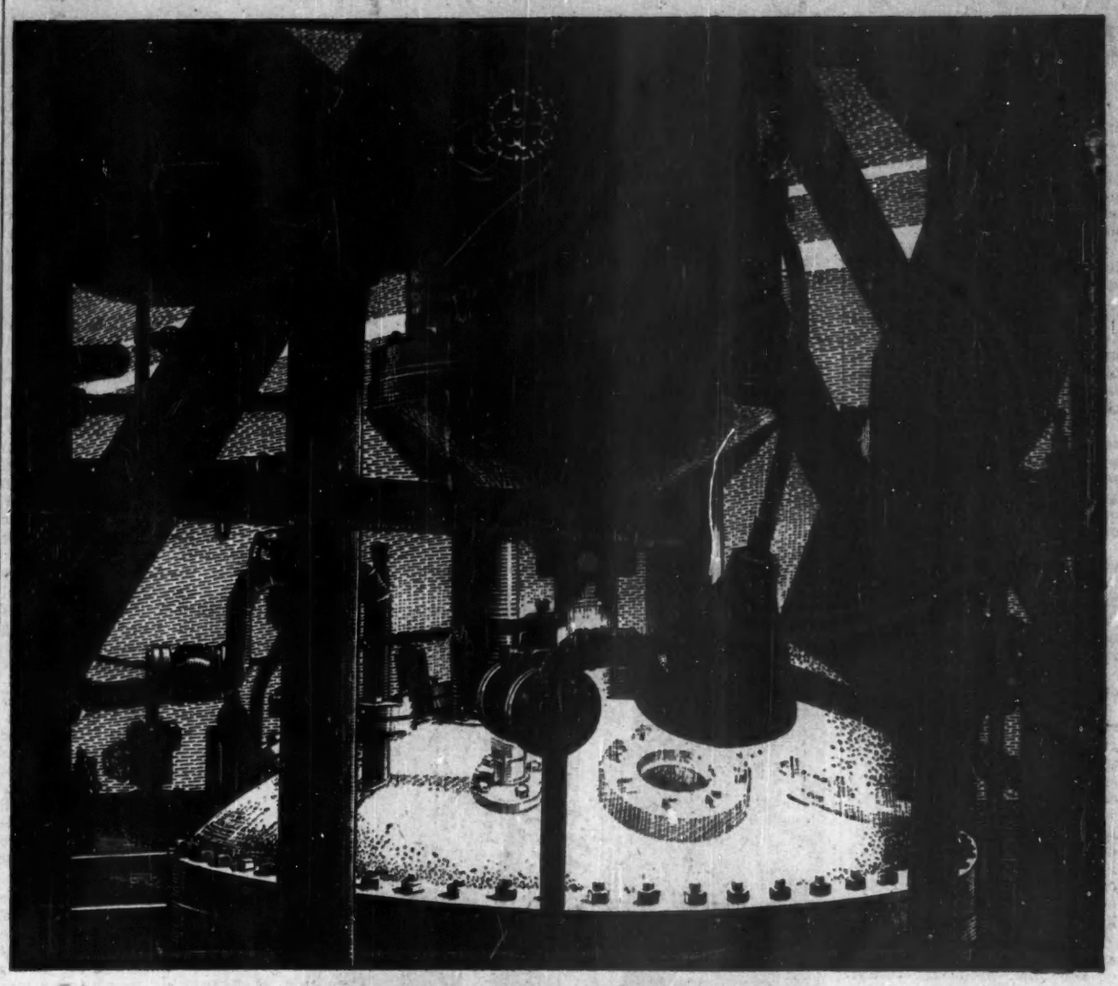
New company, **Imperial Chemical Industries of Canada Ltd.**, started construction of a plant at Millhaven near Kingston, Ont., for first Canadian production of Terylene — a man-made fibre closely associated with Dacron, turned out by Dupont. A pilot plant which can produce some 700,000 lbs. a year is expected to be in operation by the middle of next year. The main plant will not be completed until mid-1955. The complete project is expected to cost around $20 millions. The basic raw material is para-xylene from petroleum.

Canadian Industries Ltd., Maitland, Ont., plant for manufacture of nylon intermediates, adipic acid and hexamethyleneidiamine is scheduled for completion late this summer. This will be first Canadian production of this product. The nylon spinning plant at Kingston, Ont., is being expanded to twice its previous capacity in line with the intermediates plant output. New plant is expected to cost around $20 millions.

Dow Chemical of Canada's new styrene monomer plant went into production early last month. With a 2 million lbs. a month capacity the new plant will provide considerable flexibility in production and make available to the Canadian plastics industry new modified styrene materials. The plant was estimated to cost, around $4 millions. Began construction this month of a $1 million synthetic latex unit.

Cabot Carbon of Canada Ltd.'s new $3 million Sarnia plant for first Canadian production of carbon black for use in the rubber industry, is now in initial operation. Plant has a capacity of over 25 million lbs. a year. Up until now this product has all been imported from U. S.—the 1952 bill for some 60 million lbs. totalled $3.8 millions. Turning out two of the most popular grades of carbon black, the new plant will render Canada much less vulnerable on the supply front, particularly in wartime.

Made from burning petroleum oils or tars in a special type furnace with insufficient oxygen, the carbon black will be used as an important reinforcing pigment in rubber manufacture, particularly



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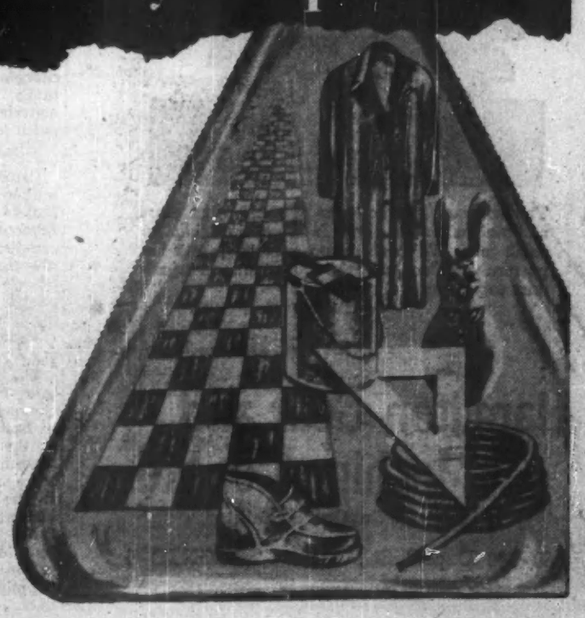

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Plastics Men See Sales Tripled By '60

The Big Push To Come In Structural Materials Fields

So optimistically high are many of the forecasts of the future growth of the plastics industry the usual practice is to scale them down by a little mental division.

But when even the most conservative forecasters estimate a tripling of sales by 1960, you begin to wonder just what this industry thinks it has.

A quick look at sales trends and the forecasts don't look over-optimistic after all. In Canada, molders' sales more than tripled in the five years from 1946 to 1951, eased for the first time last year and are now firmly entrenched on the comeback trail. A look at the longer-established U. S. industry shows that percentage sales gain keeps growing even from a base of vastly expanded production.

But it's not in these past records that the future story of the plastics industry is to be told. You can't measure the plastics industry by the same yardstick you use in other industries for the simple reason that you can't measure the potentialities of new applications—and with plastics, indicated new applications have greater sales possibilities than all the established uses so far. Here's why:

Plastics are making determined bids to get into the structural material field where they would compete with lumber, glass, light metals, ceramics and iron and steel. No longer is this a case of the cat looking at the queen. The chemists are building into plastics the necessary properties with which to fight on an equal footing for a share of this big tonnage market. All the conventional materials are such heavy tonnage items that even the small percentage replacements by plastics would mean a tremendous boost in growth statistics.

Now in wide use in home appliances, plastics bid to become a big factor in home building.

The New Uses

Is there any reason why plastics can't replace wood for inside house trim, or copper for gutters and downspouts, or iron, ceramics, and steel for pipe? Already, use of plastics in decorative wall paneling, floor material, is adding up to big tonnage. And what of the plastic auto body in the car of tomorrow?

Look at the tremendous tonnage potential in the fast-developing plastic pipe field. Already plastic is making real inroads into metal pipe business in farm application, for pipe for irrigation, water systems, drainage, etc. Municipal water departments, keenly interested in some of the obvious advantages of plastic pipes, are now starting to make their first purchases.

"As far as applications in the home and industry our business is still in its infancy," a top plastics official stated recently.

"With our wide range of plastics materials, all with varying properties, the constant chemical improvements, and new developments in fabrication, there is hardly a product in home or factory that we cannot conceivably replace some day with a plastic product."

The plastic people realize that these new markets aren't going to fall into their laps. Cost is a big factor and they have to get their fabrication methods on a more automatic, assembly-line basis. More fabricating steps are going to have to be brought under one roof and onto one assembly table. There has been too much dependence on expensive dies that may have to be discarded after a single run. A molder is only as flexible as his two or three dies.

For the plastics industry to keep up its record growth and fully embrace the tremendous future awaiting it, there must be a speedup development of plastic fabricating techniques. Inevitably the molder must be able to perform countless technical operations and carry his product much closer to the finished goods stage.

Chemical Hurdles

Although the plastic chemists have come up with some amazing results, they still have many hurdles to get over. The relatively low heat resistance of some of the plastics is limiting the pipe application at the moment. Tendency to surface "crazing" of certain reinforced plastics when subjected to pressure and vibration over long periods has recently killed what could have been a big tonnage order in a new application in this country.

Low abrasion resistance killed what looked like some promising orders in the field of toboggan and sled application. Development of heat seal—replacing the conventional stitching — and trend to thicker film gauges, is overcoming the rather prevalent tearing in some of the films and sheeting; is widening the market in other applications.

Plastics people also realize that a better educational and marketing job must be done to ensure that their products get the market reception they warrant.

Manufacturers themselves should be taught more about the product they are using, its strong points, its limitations. It has been said that more items of questionable functional value have been produced in plastic than any other material. The steps that are being taken to educate the public in use of proper names for the different types of plastic materials and their uses should be expanded. Labeling the product through to the consumer level is one way of doing this. As well, each article should be marked with the name of the family from which it is made.

Although all the basic plastic materials — the phenolics, polystyrenes, polyesters, are healthily expanding into broader fields, the material the plastics people are growing more enthusiastic over by the month is polyethylene. This continues to be the bright star in the plastics field. It is said to combine more excellent qualities, more marketable features than any other single plastic.

The industry is counting heavily on this fabulous postwar plastic to break into new fields of applications, oust traditional materials, boost tonnage. At the end of the war only about five million pounds of polyethylene flake were produced throughout the world. There were only three plants making it — two in the U. S. and one in the U. K. Today annual consumption has passed the 200-million-pound mark and is still increasing rapidly. There are now four operating plants in the U. S., two in England and one each in Italy and Germany. Canada's first plant—that of Canadian Industries Ltd. at Edmonton—is expected to come on stream this October.

Lightest Solid Plastic

Polyethylene is the lightest solid plastic with a density less than water. It has exceptional chemical resistance and dielectric properties (resistance to electric current). Water-vapor transmission is very low. It is tough and has a high impact resistance. It has good flex strength, especially at low temperatures and is not dependent on plasticizers.

With this imposing array of properties it is fitting into four broad groups: packaging, electrical applications, consumer goods (glasses, juice containers, refrigerator trays, etc.), industrial uses and others. CIL estimates that about one half of total Canadian consumption will fall into the packaging category by 1956.

The biggest development in probably the highest tonnage plastic of all—the polystyrenes—is the manufacture of medium and high impact types. Costing only 1c a lb. extra the plastic material produces a molded product with greatly increased impact resistance. By thus overcoming one of polystyrene's chief weaknesses, the improved material opens a much broader range of market applications.

It is enabling the plastic to cut increasingly into metal and wood applications e.g. refrigerator parts, other appliances. The recent availability of large-size extruded sheets in the Canadian market is helping considerably in these new applications. The high impact types are now going into toys, packaging, kitchenware, radio and television cabinets, etc.

The oldest plastic of all—the phenolics — shows promise of broadening its usefulness into several new fields. Its recent combinations with rubbers could mean large new applications. One highlight is the shell molding techniques for foundries where phenolic resins are used in place of sand.

In the new technique very little sand and hardly any steel are needed and the resulting casting is said smoother. A blend of phenolic resin and sand is poured over heated metal patterns at the part to be cast. The heat melts the blend around the pattern, forming the mold. Finally, this shell-like mold is hardened in a hot oven for a few minutes. Although well advanced in the U. S., shell-molding is just getting under way on a large scale in this country.

In the field of reinforced plastics the polyesters still show the greatest promise although tonnage production is still a bit disappointing. But with their high strength, combined with lightness, and fairly good chemical resistance, big tonnage applications are an almost eventual certainty.

The two largest uses of polyesters at present are in the boating and structural sheeting (skylights, awnings) fields. Acid tank and tank linings are also rapidly growing applications. Specialty items include cold boxes for airliners, serving trays, unbreakable street lamp globes, airplane seats, ducts, instrument panels for aircraft, etc. A large amount of interest has been found in the three armed forces and many items, many on the secret list, are now in production with a great many others in prototype form.

Auto Potential

The biggest potential of all, of course, is the application of reinforced polyesters in auto bodies. It has already been proved that an excellent product can be molded with high impact resistance and ease of repair. The big drawbacks, of course, are cost of material and length of time for molding and assembly. All the auto manufacturing firms are watching the plastics auto body picture very closely and carrying on independent testing of their own. Already two U. S. auto makers have announced manufacture of reinforced plastic bodies on a limited commercial basis.

Resin manufacturers have developed great strength and heat resistance for their products, but the next step would seem to be development of resins with less cure shrinkage and for the glass manufacturers the development of glass reinforcings that will bond more readily to the resin with less effort. It is perhaps this last difficulty which stands in the way of developing definite standards of performance in the industry. When this, together with better mass production techniques, is achieved future progress should be more rapid.

Vibrin polyester resin, the only polyester resin made commercially in Canada, is manufactured by Naugatuck Chemicals, division of Dominion Rubber Co. at their Elmira, Ont., plant. Vibrin sales are now running some 60% of all Canadian polyester sales.

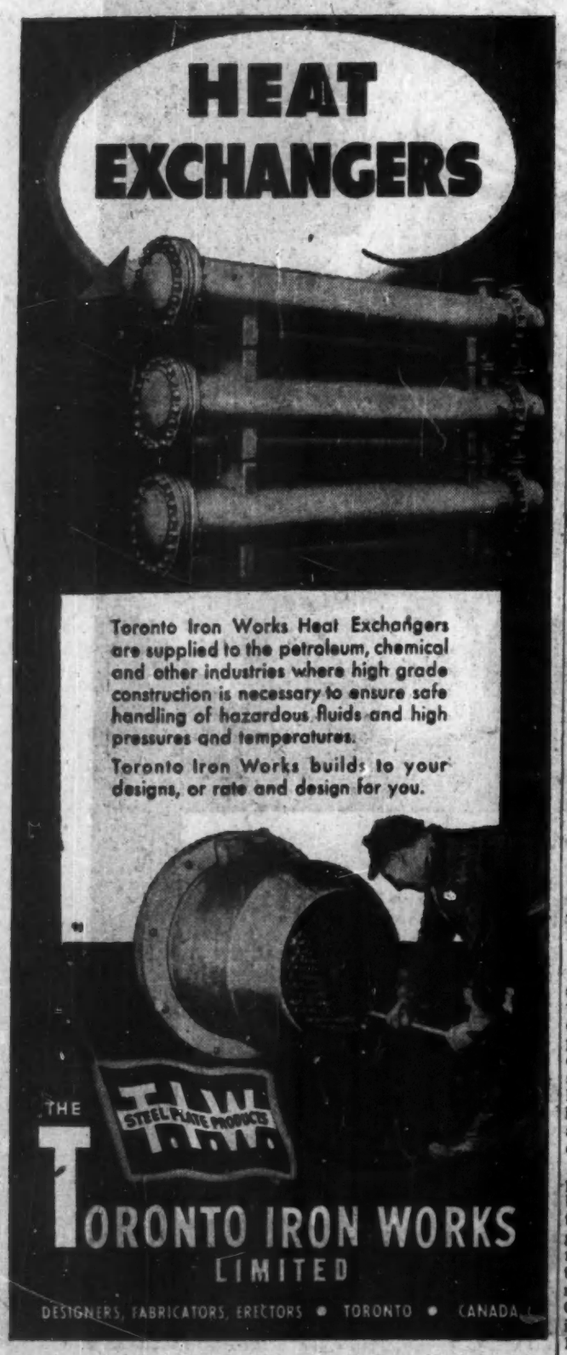
The healthily growing vinyl branch of the plastics family is enjoying the expanding markets that come with steadily increasing number of consumer applications. Important chemical developments in the resin field are building into the plastic varying special properties to fit special market applications.

Use of vinyl insulation in the electrical industry is steadily growing and flooring materials such as vinyl-asbestos tile, felt-based vinyl tile and continuous flooring are finding strong growing markets. Vinyl garden hose, in a range of bright colors, both opaque and transparent, has received great market reception this summer. A new vinyl flexible hose sprinkler attachment in lengths up to 50 ft. is an innovation this year.

New Vinyl Resin Range

An important highlight in the manufacturing end of the vinyl field will be the bringing into operation this autumn of a new plant to produce a whole new range of polyvinyl chloride and copolymer resins. Being built at Shawinigan Falls, Que., by Canadian Resins & Chemicals Ltd., the new plant will concentrate at first on resins for the new vinyl flooring and high quality phonograph records. This new plant

(Continued on page 34)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This C-I-L plant is the direct answer to a rapidly rising demand for polythene, formerly inadequately served through imports. Acknowledged to be one of the most versatile plastics known to modern science, polythene offers more useful combinations of properties than any other plastic. For example, it is the lightest of all solid plastics, tough, non-toxic, chemically inert, flexible even at sub-zero temperatures . . . has excellent moisture vapour resistance and possesses exceptional dielectric properties.

Although commercial use of polythene is only a few years old, a multitude of applications have been developed. Extruded as a film, polythene is widely used in packaging. Other major applications include housewares, squeeze bottles, electrical insulation, piping and paper coatings for a host of widely diversified uses in industry and general living.

Located at Edmonton, this new plant literally sits on top of its basic raw material. Ethylene produced from the ethane in natural gas is purified, and then polymerized to form polythene under conditions of tremendous pressure and elevated temperature. By early 1954, the output of the new C-I-L polythene plant will provide adequate supplies for Canadian consumption.

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Research laboratories recently completed by Monsanto Canada Limited constitute a major contribution to the research facilities of the Dominion. It is the company's belief that over the years their industrial research gives concrete expression to their policy of "Serving Industry—Which Serves Mankind."

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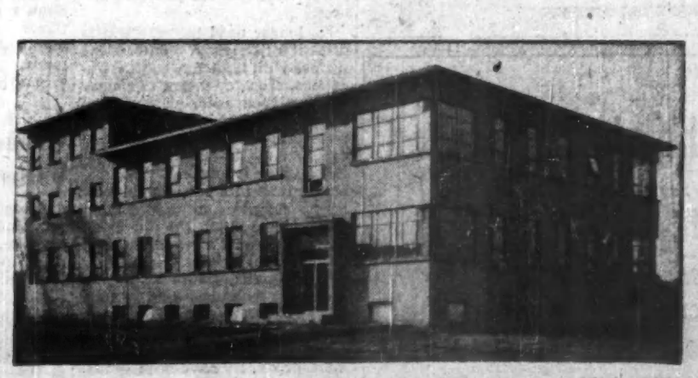

The Leo G. Ryan Research Laboratories and Pilot Plant at Monsanto Canada Limited headquarters in Ville LaSalle, Que. In these laboratories general research is carried out with a view to expanding the field supplied by this company in Canada.

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The Big Potential In Plastic Pipe

Could Become Biggest Single Tonnage Outlet In Plastics

A 20-ft. length of water pipe that a child can carry in one hand . . . the fabulous growth story of the plastics industry is being told in just such terms.

The pipe is light because it is made out of plastic. The market potential is tremendous. The way plastic is eating into the iron and steel pipe business has the old-time pipe-makers worried. In self-defense many of them are jumping into the plastics business themselves.

It's not just what has been done so far—that in itself amounted to around $15-$19 millions last year in U. S., around one tenth of that in Canada—but the potential in this field that has the plastics people excited. Gradually as they overcome old limiting weaknesses in plastics, come up with new quality developments, the pipe markets take on huge new proportions.

Ask the resin-maker what the pipe market could eventually mean in terms of tonnage and he'll probably just smile and say "plenty." Some of them will add that it could in time grow to be the biggest single tonnage outlet in the whole plastics field.

What It Will Do

Even the steel people will readily agree on some of the obvious advantages of plastic pipe: it's only about one eighth as heavy as steel and a good deal easier to install; it's corrosion-resistant; is flexible and can be made to parallel uneven ground, turn corners without couplings.

But the steel people are voluble on its big weaknesses; so far most plastic pipes are unable to withstand really hot temperatures, even boiling water often starts to do strange things to them; so far it can't stand very high pressures, its bursting point is relatively low. This rules out its use in hot water systems and in many industrial applications where high-temperature fluid is conveyed, or where high pressures are involved.

In Canada about 90% of the plastic pipe sales are being made to farmers for conveying water e.g. drainage, irrigation, waterworks systems. In these applications it is making inroads into the iron and galvanized pipe field. To be rendered relatively corrosion-resistant metal pipes have to be treated with tar, etc. This helps push cost up past that of the competitive plastic product.

The next most promising market application in the water field is in municipal waterworks systems. Although most Canadian municipal departments are watching the plastic pipe picture closely only a limited number have actually started using it, and these in a limited way. But water mains of plastic pipe are being used in many sections of U. S.

Pipe made out of the popular polyethylene plastic is getting the big slice of the market so far. In the U. S., for instance, it is accounting for around 75% of all the plastic pipe produced. Apart from its non-corrosion property and light weight, its big selling features are its long life and relatively low price.

In one case 2,000 ft. of 2-in. regular steel pipe in a coal mine lasted only eight hours under particularly severe conditions. This was replaced with a polyethylene pipe which has been in use over two and a half years with no sign of deterioration. In addition, the labor cost of installing steel pipe was greater than the cost of the pipe. This often leads to abandonment of pipe rather than moving it to new facings. The plastic pipe, however, is easily put into place.

Costs Are High

Although one or two of the thermosetting types of plastics—especially the reinforced polyester type—turn in superior performances as far as heat and pressure resistances are concerned—their generally higher costs are seen limiting applications at the moment.

Reinforced with fibre glass the polyester types combine considerable strength with lightness and also have good chemical resistance. They have been used in specialized applications in oilfields and industrial and chemical plants.

Plastic people are pinning a good deal of expansion hope on one big quality possessed by several of the plastic family—high resistance to a broad range of corrosive chemicals. To beat corrosion, metal pipe people have had to rely on expensive stainless steels, special alloys. If the plastic industry can lick the old high temperature "bug"—and top plastic research experts say they can—wide new applications will open up in the chemical and petroleum industries.

Some rather remarkable results are being obtained in bonding plastic coatings to the inside of steel both in pipe and hot water tank applications. The plastic liner provides the non-corrosion requirement and the steel the structural strength. There may be important developments along this line within the next few months.

Although most of the plastic piping used in Canada up to now has been imported from the U. S., a number of Canadian extruders and manufacturers are either now in the field or preparing to enter it shortly. Some of the big names in the plastic pipe extrusion field in this country are: Micro Plastics Ltd., Chatham, Ont.; Yardley Plastics, Chatham; Ontario Steel Products, Gananoque, Ont.; Canadian General Electric, whose product is being distributed by Beatty Bros., Fergus, Ont., etc.

Plastic pipes gaining acceptance are:

Kralastic pipe, a rubber-styrene co-polymer, of which Uscolite is a modified form, for use where corrosive conditions are encountered. These might be fluids handled in chemical plants, where this pipe has had wide use because of its chemical resistance, or corrosive conditions of atmosphere or soil encountered externally. Offers strength and high impact resistance, but may not be used above 190 deg F. operating temperatures.

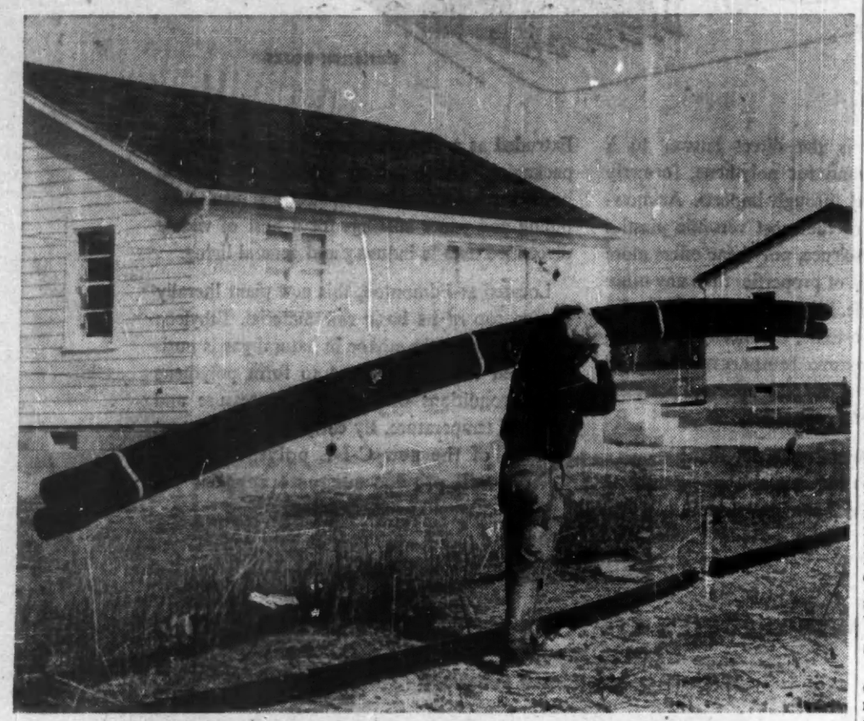
Polyethylene pipe is very light and very inexpensive. Good chemical resistance and coils easily. Suitable only for low pressure work at temperatures below 130 deg. F.

Butyrate pipe is largely used in the oil fields for handling petroleum and salt water. Good resistance to soil chemicals, but limited in its service to the chemical industry.

Saran pipe has excellent chemical resistance. Disadvantages are brittleness and relatively high co-efficient of expansion.

Polystyrene pipe has good chemical resistance but is extremely brittle, indicating considerable caution in handling corrosive materials.

Re-inforced Polyester pipe offers excellent chemical resistance, good strength and burst resistance, and may be used with high operating temperatures. Polyrein Corporation in Sherbrooke have custom made some of this pipe, and interest in it is very high. One particular advantage is that manufacturing methods of Vibrin polyester-glass laminates lends itself well to custom work, so each pipe can be engineered for its particular application.



One of the fastest-growing applications of plastics is in the pipe field, where lightweight (the workman is carrying three 20-ft. lengths of 4-in. pipe) flexibility (it can be bent around obstacles) and corrosion-resistance are gaining it wide favor. Made of Tenite butyrate plastic, tight-fitting joints can be made in less than five minutes with slip-sleeve couplings and solvent cement.

Plastic Men See Sales Tripled By '60

(Continued from page 33)

along with a new calender line at the company's other unit at Shawinigan Falls will cost around $3 millions.

There has been a considerable growth during the past year in use of melamine plastics in the dinnerware field. Last year's large-scale order from the Department of National Defense for a half-million melamine mess dishes for the Canadian Navy has been followed by large orders for the same products for the Army and Air Force. Sizeable melamine dinnerware orders are also being placed by the Department of Health and Welfare for hospital and special institutional use. General Plastics, Toronto, has been one of the major molders in this field.

An increasingly important market for the synthetic resin producer is the $120-million-a-year paint industry. Although the veteran alkyd resins still account for the biggest share of this business (sales have about quadrupled in the last 10 years), manufacturers of practically every type of resin are either in the paint market, in some application, or planning to get into it. Among the other resins the vinyl types are showing considerable promise. Polystyrene is making considerable headway both as the chief ingredient and combined with butadiene in the so-called rubber base paints.

Vacuum Molding

In the molding field, the widening use of vacuum molding techniques is of major importance for Canadian industry. In this technique an extruded plastic sheet is drawn over a designed mold by means of exhausting most of the air from the inside and creating a relative vacuum. The molds used in this type of operation are relatively inexpensive—as low as $200 as compared with an average size metal mold used in conventional molding techniques of around $15,000.

The new molding practice is of particular value where large parts are to be molded and very close tolerances not necessary, e.g. inside refrigerator doors, radio cabinets, etc. Although polystyrene sheets are being used most widely in this field, other materials such as vinyl acetates, butyrates, etc., may be used.

The relatively low tooling costs make this technique especially adaptable to small runs and as such can fill a long-felt want—small runs for engineering samples or market analysis.

In Canada the relatively limited demand for many plastic items make fabrication of the item unprofitable largely because of high initial mold cost. By use of the new molding technique molders will often be able to accept much smaller orders.

Quality, Variety Up In Film, Sheeting

From barrels of sand-like resins to lumps of hot, rubber-like plastics and dainty, lace-embossed curtains . . . this is the coal-to-pearls story of the film and sheeting end of the plastics industry.

Whether the end product is a gaily colored inflatable toy, a lampshade or a raincoat, the lowly beginning is the same—a barrel of resin that looks like sand. But by proper admixtures of plasticizers, stabilizers, lubricants and pigments under controlled heat and pressure conditions the result is one of the fastest growing product lines in the plastics business.

No longer need the plastic film present a flat, shiny, uninteresting surface with limited market applications. Now, by means of cleverly developed color-printing and embossing techniques it can be transformed into colors and textures that simulate everything from linen to pigskin. This has enabled the film people to become major suppliers to the handbag and luggage fields, the upholstering and drapery trade, nursery products, tablecloths, etc.

Quality Improved

Quality trend has been steadily upward as one after another early weaknesses have been overcome. In recent months more and more producers have been swinging into the No. 3 gauge thicknesses where the narrower No. 2 gauge product once filled the bill. Greater tear-resistance and tensile strength has resulted. Take a look at the inflatable beach toys you will see this summer, the drapery materials in the summer cottage—chances are you'll notice the difference.

Although the Canadian industry is expanding rapidly, about 30% of the products still come in from the large, longer-established U. S. industry. Despite the fact that domestic producers have been fast developing their printed and embossed lines, the smaller Canadian industry has not been able to keep up to the variety of printed and textured lines made available by large U. S. competitors. Most of the competition is in the roll sheeting form, and to a lesser extent in made-up goods.

Installation of a third calendar line—considered one of the most modern in North America—at the Shawinigan Falls, Que. plant of Canadian Resins & Chemicals last month has expanded the company's vinyl film capacity considerably.

Camera Assembly Planned By Ansco

Assembly of cameras and some packaging and cutting of photographic materials is planned by Ansco of Canada Ltd. for a new plant under construction at Toronto. This will be the firm's first manufacturing in Canada.

Most of the initial building, on a five-acre site, will be devoted to warehouse and head office purposes. It will include specially air-conditioned rooms for storage of sensitized photographic products. Parent company is General Aniline & Film Corp., of New York, whose Ansco division is one of the oldest manufacturers of photographic materials. The firm opened its Canadian sales office in 1908.

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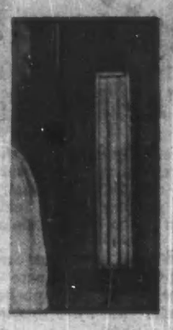

WHEN you mount calender rolls on Timken tapered roller bearings, the gage of plastic film and rubber sheeting *stays* uniform, because Timken bearings hold rolls in accurate alignment. You get uniform gage for the length of the sheet, sheet after sheet. And you get more yards per pound of material, because Timken bearings hold gage to minimum tolerances.

Roll necks do not require remachining since the tight fit between the neck and the bearing inner race eliminates roll neck wear. As a result, down-time is minimized.

The true rolling motion and smooth surface finish of rollers and races of Timken bearings practically eliminate friction and wear within the bearing. You maintain calender roll precision for longer periods of service.

Timken bearings are tapered in construction which permits them to take radial and thrust loads in any combination. Line contact between rollers and races gives them extra load-carrying capacity.

Make sure you get all the advantages of Timken bearings in your calenders, mills, refiners and mixers. For full information, write The Timken Roller Bearing Company. Cable address: "TIMROSCO—Canton, Ohio".

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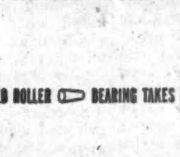

Diagram shows how calender rolls are mounted on Timken tapered roller bearings to maintain uniform gage of plastic film and rubber sheeting.

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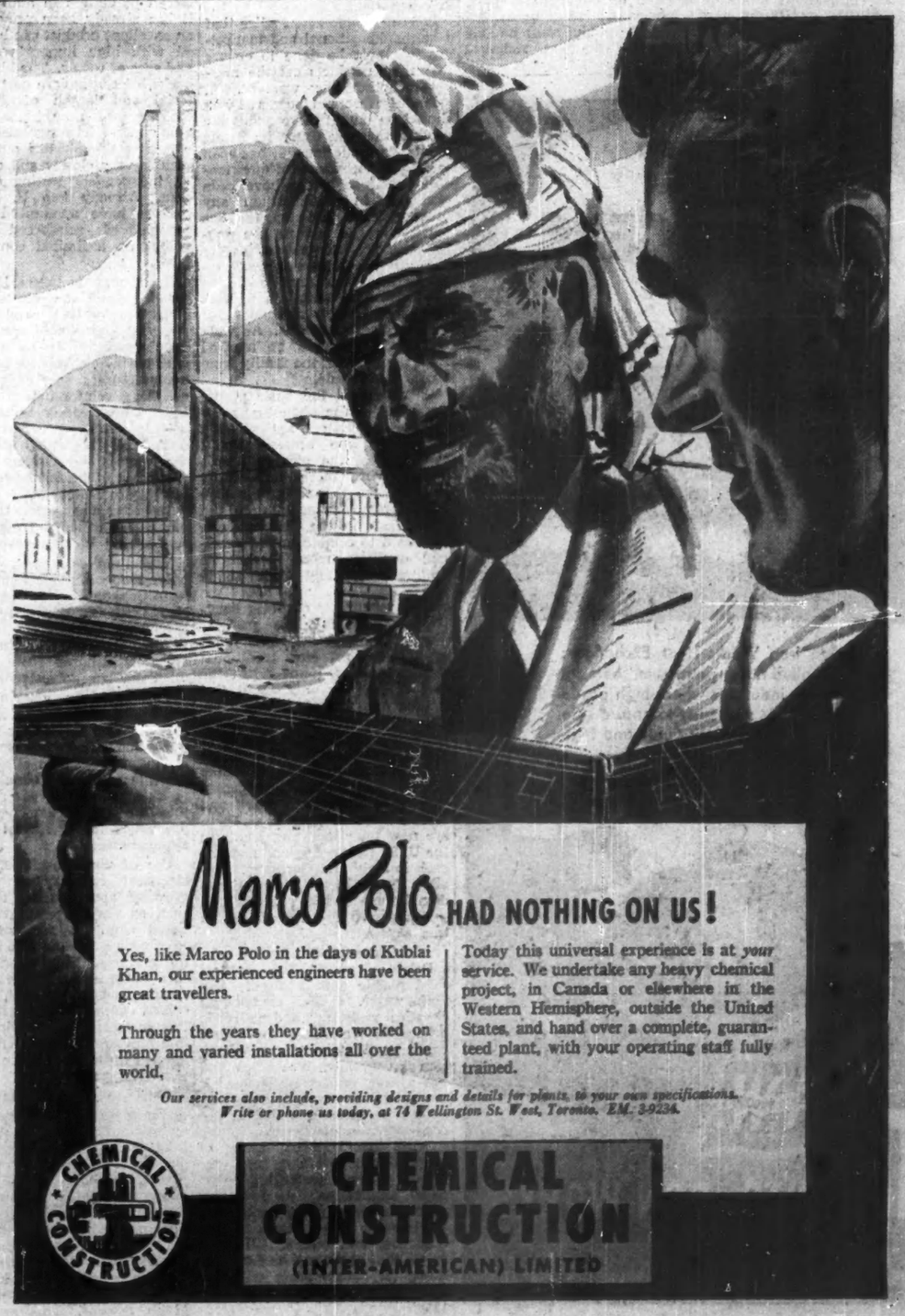

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Polymer Leads World In Rubber Developments

Now Great New Research Lab. Goes Up To Hold Leadership Position

Nearing completion at Sarnia is one of the most modern rubber research laboratories in the world —the $1¼ million investment by Polymer Corp. to ensure that Canadians get the best man-made rubbers available, at least as quickly as anyone else.

To be manned by a top-quality staff which has already proven itself in both the fields of creative and control chemistry, achievements at the new lab should be impressive.

"Without research there can be no technological progress." This is a fundamental credo at Polymer where officials realize that in the fast-moving petrochemical industry a plant, or a product, can be rendered obsolete over night by a new development.

Far from being caught napping in the lustily growing fast-changing synthetic rubber industry, Polymer has come up with some pretty important developments of its own. The fact that out of its standard type plant, constructed under the emergency of war to turn out two general type rubbers, is today producing around 30 different varieties for Canadian industry is a record in itself. In the U.S., for instance, most of the broadening range of special rubbers are being turned out from specially constructed units.

Produce Raw Materials

More than that, Polymer is making its own rubber raw materials—styrene and butadiene —from the ethylene and butylene hydrocarbons it extracts from refinery gases. The surplus ethylene and styrene have become the basis for two new plants nearby making polystyrene plastics and ethylene glycol for anti-freeze.

Polymer also produces its own steam and electric power, some of which it sells to nearby industry.

Add all this together and Polymer has no counterpart in the world.

Here are a few of the highlights in Polymer's record of accomplishments over the past several years:

—It has been the first company to produce oil-extended rubbers on a commercial basis. By boosting output of rubber from approximately the same amount of raw material (styrene and butadiene) by addition of certain oils a lower-priced product has been made available with at least as good qualities. This has given the man-made product a new edge in the battle of the rubbers.

—Polymer was the first to produce on a commercial scale cold, oil-resistant rubber. This has opened up broad new markets.

—The firm initiated some important developments in the butyl type rubbers (used in tubes chiefly) which has helped overcome problems encountered in low-temperature operating conditions.

—It has taken the lead in commercial application of a new catalyst developed by Dow Chemical of Canada which has boosted production of butadiene sharply from existing plant facilities.

—It is the first Canadian manufacturer of a latex suitable for use in the popular rubber-base paints. Market reception has been excellent and Polymer officials claim this latest product promises to exceed in importance any of company's other special type rubbers.

War To Peace

These are just a few of the reasons why the sprawling, $70 million petrochemical giant on the banks of the St. Clair River has been able to stay in the forefront of the synthetic rubber picture. When rushed to completion in the dark days of 1943 the only goal was—rubber at any cost. With allied victory came a new kind of goal—and Polymer's very existence depended on it—production of synthetic rubbers that would compete with Mother Nature's product in the hard, competitive markets of a peacetime economy.

The fact that Polymer has not only thrived under postwar marketing conditions, but is still operating close to capacity after completing 25% expansion program, tells its own story. The pattern of rubber consumption backs it up; approximately 50% of all rubber being used in Canada today is synthetic—and that pretty well means it has come from Polymer; proportion of man-made rubber going into auto tires has reached a new peacetime peak.

Polymer officials readily admit that the wild price antics of natural rubber following outbreak of the Korean war served as a big marketing boost to their even-priced product. Natural rubber soared to a peak of around 80c a lb. (top quality) in spring, 1951, and subsequently tumbled to current levels, around 25c a lb. In the same period the synthetic product (GR-S) only moved up to 25.1c (delivered) and in July of last year back to 24c where it now rests.

But Polymer people see as highly significant the fact that for the first time in falling natural rubber prices (medium and lower-grade varieties are now actually underselling synthetic) there has been no appreciable reduction in sales of the synthetic products.

Promising Market

The market potential over the next few years is seen as "most promising" by top Polymer executives. With world rubber consumption (all types running around 2.4 million tons, the supply-demand picture is probably as closely in balance as it ever will be. But rubber people look for a jump in world demand of at least 25% by 1960.

With very little new investment money going into the natural rubber field and with increased natural production only possible on a gradual scale, it looks as if the major part of the expanded output must come from the synthetic rubber industry.

Europe is virtually an untapped market for the synthetic product. With very limited production facilities and few trading dollars the accent has been on natural rubber which can be purchased with sterling. It doesn't look as if any definite plans for plant construction will materialize this year except in Germany where a decision has been made to expand the present limited production capacity.

Polymer went into the export market in 1946 and has been in it ever since. This year some 30% of total production is going to the overseas markets, another 20% to the U.S. What happens to this export business after the U.S. synthetic rubber plants have been disposed of to private industry is anybody's guess. Polymer is counting on its long-standing customer relations plus certain operating advantages to enable it to hold a major share of the overseas market, at least until European producers get in to the production picture on a large scale.

When rising demand for their products made Polymer officials expansion-minded, announcement of construction of a second modern refinery in the area—that of Canadian Oil Cos.—helped speed the plans to completion. The new refinery meant additional supplies of the all-important hydrocarbon feedstock. Since then a third refinery has been announced—that of Sun Oil Co.

Picture Changed

To make synthetic rubber that will compete qualitywise and pricewise with the natural product depends on a whole range of factors. Two of the most important are a stream of refinery gases reasonably priced and the proper equipment and chemical know-how to break down the complex petroleum hydrocarbon molecules contained in this stream and then rearrange them again in the proper pattern.

A considerable portion of the rows of compressors, distillation towers, boilers and pumps, stirring vats, storage tanks, etc. that make up Polymer are concerned with this basic operation of breaking down the molecules into simple units and then joining them together again in a pattern of long, chainlike structures.

Polymer is chiefly interested in the ethylene and butylene hydrocarbons contained in the refinery feedstock. After purification of these two basic products, Polymer then converts them into the all-important intermediate raw materials of synthetic rubber—styrene and butadiene. Helping in the process is one other basic ingredient which Polymer buys from the steel companies—benzol.

In making the GR-S types of rubber styrene and butadiene are mixed under pressure in a solution of soap and water with "certain chemicals." A catalyst is then added which stimulates the two basic hydrocarbons to become linked together as a co-polymer. This step—called polymerization —generally requires about 9-12 hours for the average rubbers.

Further Process

The polymerization product emerges as synthetic rubber in latex form looking much like the milk from the rubber tree. Some of this is shipped to rubber processors for use in such things as foam rubber and adhesives. But the big demand is for solid rubber and so the process must be carried a few steps further—to dried, compressed 75-lb. bales available for shipment to any part of the world.

In its rubber making operation Polymer still produces considerably more styrene than it uses. Although the neighboring chemical company—Dow Chemical of Canada—has just recently brought on stream a new unit to make its own styrene, it is continuing to purchase a substantial quantity of Polymer's styrene. Monsanto Canada is the other chief customer. In its over-all sales picture, chemicals and utilities (steam and power) represent some 15% of Polymer's total.

During the last two years there has been a marked change in the rubber industry's acceptance of the synthetic products. A good deal of this has come as a result of development of new types of rubbers, particularly cold rubber and the oil-extended rubbers both of which have performance advantages over the natural product particularly in passenger tire operation. But the rubber chemist is now a specialist ready to build into his products the properties required for the job to be done.

Today Polymer's production is going into hundreds of end products besides the big volume tire and tube market. It's going into scuff-resistant luggage, long-wearing shoe soling, gasoline-resistant pump hoses, insulation for wire and cable, self-sealing fuel tanks for aircraft, tough conveyor belts, and many other products.

The Special Chemicals They Use In Rubber Manufacture

Rubber manufacture means a good deal more than just a mixture of styrene, butadiene with a little carbon black thrown in. It means use of a group of special rubber chemicals which help the producer control his processing steps and turn out a better product.

The special chemicals include:

—Accelerators, for better and faster cures, making possible mass production in rubber.

—Anti-oxidants, for protection against oxygen and ozone in the air. (Oxidation of rubber is the chief cause of deterioration).

—Such special products as blowing agents for foam and sponge rubber.

—Retarders, to delay cure, while providing a complete cure, so as to allow safer handling during processing.

—Waxes to protect against sunlight and cracking.

Rubber chemicals are increasing in use more rapidly than the increase in rubber consumption, because synthetics, which are becoming proportionately more important, require more chemicals per pound to impart the desired characteristics.

There is only one Canadian producer of rubber chemicals—Naugatuck Chemicals at Elmira, Ont. Along with the various other chemicals Naugatuck supplies the big bulk of the requirements in this country. At its development laboratories at Elmira, Naugatuck has also researched and developed several new chemicals including Octamine, an anti-oxidant now finding wide favor in U.S., and Polylite, an anti-oxidant for GR-S types of rubber, the most commonly used synthetic.

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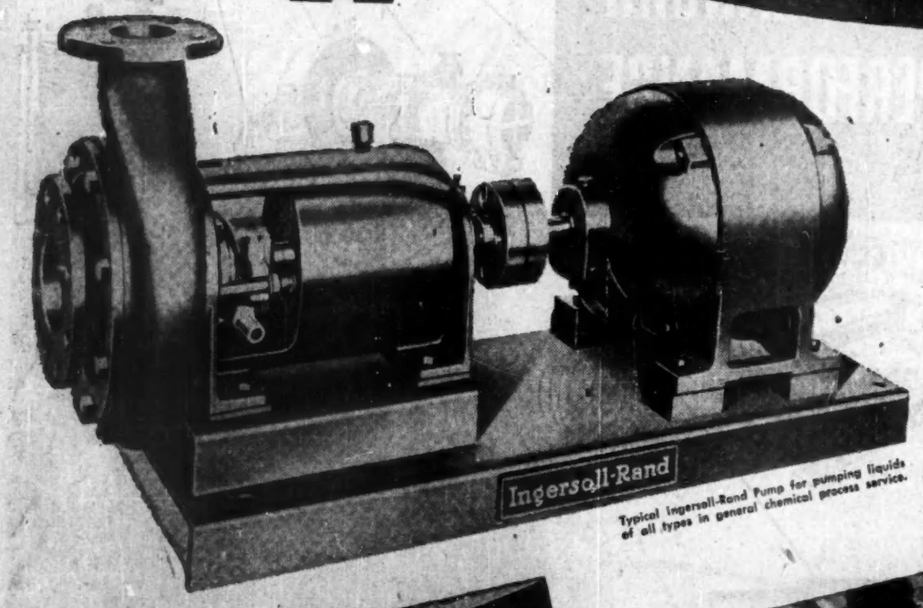

Typical Ingersoll-Rand Pump for pumping liquids of all types in general chemical process service.

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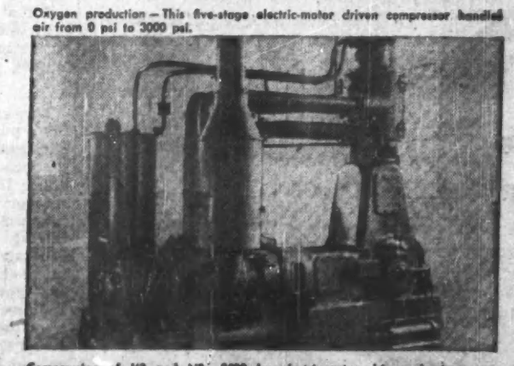

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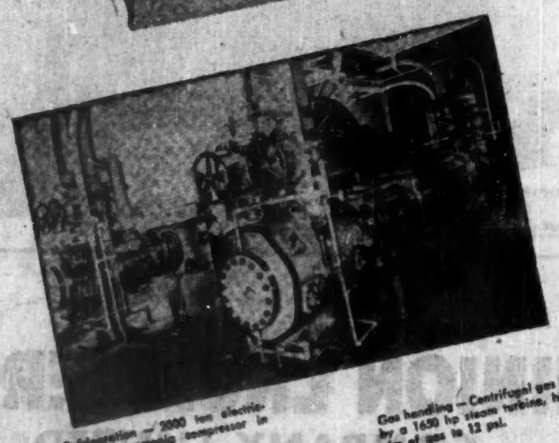

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How The Pharmaceutical Industry Is Marching Ahead

Advances in 'Wonder' Drugs, Many New Items On The Way

To the individual Canadian, the impact of chemistry is probably most obvious in the thousands of drugs turned out by the pharmaceuticals industry.

Ranging from the routine items such as aspirin or nose drops lining his druggist's shelves to the latest antibiotics or hormones administered by his physician, they are helping raise the nations standard of health in countless different ways.

Pharmaceuticals is one of the fastest-stepping branches of the chemical industry. Last year, the value of production in Canada totaled $90.6 millions, against $36.5 millions in 1951 and $46.3 millions in 1945.

And it's not only growing fast. It's changing fast, too.

For instance, none of today's approximately 10 major antibiotics (such as penicillin, streptomycin) was being used before the last war. Use of the hormones (cortisone, ACTH are two of many) as weapons against disease dates only from 1929. Even development of the vitamins did not get under way until between 1917 and 1920.

Each year, many outdated drugs are removed from the market by Canada's pharmaceutical houses. Into their places go new products of laboratories the world over, all aimed at just one thing — better medical treatment.

Key Research Role

As in all phases of the chemical industry, research plays a key role in the drug business, both in providing better products and in keeping an individual firm up with the pack. And some of the most startling results seem to stem, to the layman anyway, from the most unlikely materials (sulpha drugs from a synthetic dye, penicillin from a mold something like bread mold.)

On Canada's East Coast, for instance, scientists are looking into the possibilities of making insulin from the pancreas of whales, of producing a cancer preventive from lobster shells, and of developing a leprosy cure from fish oils.

Generally speaking, the drug business is a fairly steady one, although it is subject to some extent to the ups and downs of the business cycle.

"In tough times, people will probably cut out, say, that extra box of vitamin tablets for their kids," explains one man. "But sickness continues in good times or bad and drugs are needed to treat it."

Demand Stays High

Demand is continuing high these days, although the United Kingdom has been moving in on domestic markets to a greater extent in an effort to obtain dollars and more and more American manufacturers have been "discovering" the large market lying to the north of them.

To get an idea of the scope of new pharmaceutical developments, let's look at just a few of the products put on the market lately by the Canadian industry.

Ayerst, McKenna & Harrison Ltd., for instance, has developed "thiosulfil" tablets in collaboration with other chemical laboratories. Used for genital urinary tract infections, they were put on the market for the first time late last year.

This year the company started producing a new long-acting oral penicillin at its Montreal plant. This form of penicillin doesn't need to be taken as often as other types.

About six months ago, the company started marketing "trilene" in the United States for the first time. This is an analgesic developed by Imperial Chemical Industries in England which is inhaled and removes the pain without knocking you out. It's used in child birth, in minor operations and for dental work.

"Trilene" has been sold on the Canadian market for about two years.

Ayerst, McKenna & Harrison, incidentally, is probably unique in one respect among Canadian pharmaceutical houses. Formed in 1924, it subsequently expanded into the United States and, while the U. S. offspring has outgrown the parent in size, all research facilities are concentrated in Canada.

Employing 75-100 people on research alone, it has the largest biological and pharmaceutical laboratory in this country.

The company also illustrates how better production processes cut the price of drugs and thus make them available to more people. Ayerst, McKenna & Harrison produced the first penicillin in Canada, nearly 10 years ago. For 100,000 units, the cost was $16. Today, the same quantity (of much better quality) sells for 25 cents.

But getting back to new products.

Another Canadian First

Charles E. Frosst & Co. was the first to introduce "trulfacillin" into Canada and has been bringing out suspensions (liquid form) from the original and making improvements to the original. A triple sulfonamides and penicillin combination, it is used in treatment of a number of bacterial infections.

The company has also been keeping the medical profession supplied with radio-active compounds, which are opening up new fields in medical research. It is the sole licensee for manufacture of radio-active drugs (phosphorus and iodine). The company also supplies U. S. institutions and the U. S. Government with radio-active steroid hormones.

Within the last year, the Frosst organization made available another analgesic and anti-rheumatic preparation, in tablet form. Called "dolomide," it is a salicylamide.

"Compound F" (also called "hydro-cortone") which was introduced to the Canadian market early in 1952 by Merck & Co., is now a "made in Canada" item. Producing compound F is a '27-step process and it is carried back as far as possible at the company's Valleyfield, Que. plant.

Raw material is brought in from the U. S. for the product, which is particularly useful when treatment of arthritis is needed in only a few arthritic joints.

These are only a few of many new products being launched by the pharmaceutical producers.

What's Ahead

Meantime, research work is going ahead quietly in labs across the country. Quietly, because so many experiments and tests are needed before a new drug can be put on the market, because a company can get so close to success and then fail.

For instance, a great deal of work is going into the study of STH, known generally as "the growth hormone" and turned out in small amounts by Frank W. Horner Co. and the Connaught Medical Research Laboratory in Toronto. Potentially useful in many fields of medical treatment, it has been under study by scientists for years.

During the last year, a small amount has been used for clinical experiment in humans but a great deal more must be uncovered regarding the hormone's fundamental action.

One group may get certain results with STH and another may not be able to duplicate them or may get completely opposite results.

There are about 125 companies handling pharmaceuticals in Canada, employing some 7,500 people. Not all of these manufacture in this country but a growing number operate sizeable plants here.

Besides those mentioned earlier, many of the large producing firms are household names: Parke Davis (which recently bought property in Brockville as a possible site for a new plant), Squibb, Ciba, Abbott, Sharpe & Dohme, John Wyeth & Bros., Desautel Laboratories, Eli Lilly, Laboratoire Nadeau, etc.

The industry's products include "ethical" drugs, which are preparations prescribed by physicians to aid in curing specific conditions and are advertised only in medical or pharmaceutical journals; and patent or proprietary medicines, which are advertised everywhere and are open for anyone to buy without prescription.

Even The Birds Enjoy Chemical Wonders

Even the birds are taking advantage of the marvels chemistry has produced — as witness this nest built by an enterprising oriole in Oshawa. The nest is fireproof, vermin proof, washes easily and dries quickly after a rain, and won't shrink. The reason: it was woven by the oriole from insulating glass "wool" from the Fiberglas plant in Oshawa.

Citric Acid Now Made Here

Kemball, Bishop & Co., Canada's first manufacturer of citric acid, has recently commenced production in a section of the former Defense Industries Ltd., plant at Cornwall, Ont.

When production is completely under way the firm will be in a position to supply all Canada's citric acid needs. The product goes largely to food and medicinal industries. Previously, much of the citric acid used here came from the worldwide parent company, with headquarters in England. The company intends also to expand its processes to manufacture other fine chemicals.

Big Chemical Role In Pulp and Paper

Chemical research is helping to steadily unlock many secrets valuable to Canada's biggest industry—pulp and paper. It has had a major hand in the tremendous development of the industry over the last 50 years, contributing to improvements in production methods and products, and helping raise the volume of byproducts.

Despite the big strides made so far, there's still all kinds of elbow room for researchers. Some experts, for instance, think that today's waste materials from chemical pulping may sometime yield values far in excess of the cellulose itself.

At meetings this year of the technical section of the Canadian Pulp & Paper Association, an appeal was made for more fundamental research on wood as a source of chemical raw material. It was noted that wood today plays only a small part as a commercial chemical raw material, and three reasons were cited:

1. Scientific understanding of its composition and structure is incomplete.

2. Economics are unknown because profitable markets and uses are not proven for all the chemicals which might be extracted.

3. As long as present uses of wood are profitable, and other sources yield chemicals that might be obtained from it, there is no compelling urge to explore wood's chemical possibilities.

But a good deal of work has been and is being done toward recovering chemicals from the pulping process.

Waste Liquors

For example, in turning out kraft pulp (used to make wrapping paper, paperboard and other products), the unused cooking liquor has long been burnt in a recovery furnace, yielding chemicals used to make new liquor. During the burning, gases are generated which also contain useful chemicals. As a result, various types of secondary recovery equipment have been designed to treat these gases and it has been found that relatively high chemical, and heat, recovery can be obtained for a low capital expenditure.

Some of the waste liquor from kraft pulping is used in the production of plastics and vanillin.

Many researchers these days are training their guns at waste liquor from sulphite pulp production, the economic disposal of which has always posed a big problem for producers.

Usually, around 50% of the original wood, including lignin and other components, is dissolved in the liquor during the sulphite cooking process. A small part of this waste liquor has been used for years to make road binder but it is a great potential source of a host of chemical products.

Here and in other countries many substances have been extracted from sulphite liquor and some of these—such as alcohol, fodder yeast, Torula yeast for human consumption and lignin as a soil conditioner—have found their way into commercial uses.

It will probably be many years yet before uses can be found for most or all of this waste liquor. But progress is being made.

Pulping Process

Chemical research is very important in the pulping process itself.

For example, it's estimated that corrosion costs Canadian kraft pulp mills almost $1 million each year. Walls of the digesters in which the wood chips are cooked to extract the cellulose fibres are eaten away but what exactly causes the corrosion is not yet known.

Ten companies making kraft pulp, representing 70% of the tonnage produced in Canada, are sponsoring a project on the problem being conducted by the Pulp & Paper Research Institute of Canada. Work is also under way in many other countries.

Out of this research is expected to come modification of existing practices to reduce the corrosion materially.

Chemists are also helping solve one of the most important problems confronting the pulp and paper industry—finding a way to replace present batch pulping methods used for kraft, sulphite and soda pulps with a continuous production process.

This would revolutionize Canada's pulp and paper industry if accomplished, reducing costs substantially. Is it likely in the near future?

Dr. L. R. Theismeyer, president of the Pulp & Paper Research Institute of Canada, feels that most of the fundamental research needed to prove the feasibility of the process has now been done. What is required now, he thinks, is a sharply stepped-up program of applied research.

"If our industry really went after it," he says, "I think a new mill using a continuous process and capable of producing various types of pulp could be operating in less than 10 years—and parts of the changeover may become practical long before that."

The Institute, incidentally, is one of the world's foremost centres of cellulose research. Recently, it released details of a major advance in pulp manufacturing methods which has been developed by four of its scientists. Called the "Va-Purge" process, it can reduce chemical pulp manufacturing costs and increase output per cord of wood with no resultant reduction in quality.

It resulted from about five years of laboratory pilot plant and mill-scale investigation and consists of pretreating the wood chips with steam under pressure to remove the air in the tiny capillaries and pores in order to permit better penetration by the cooking liquor.

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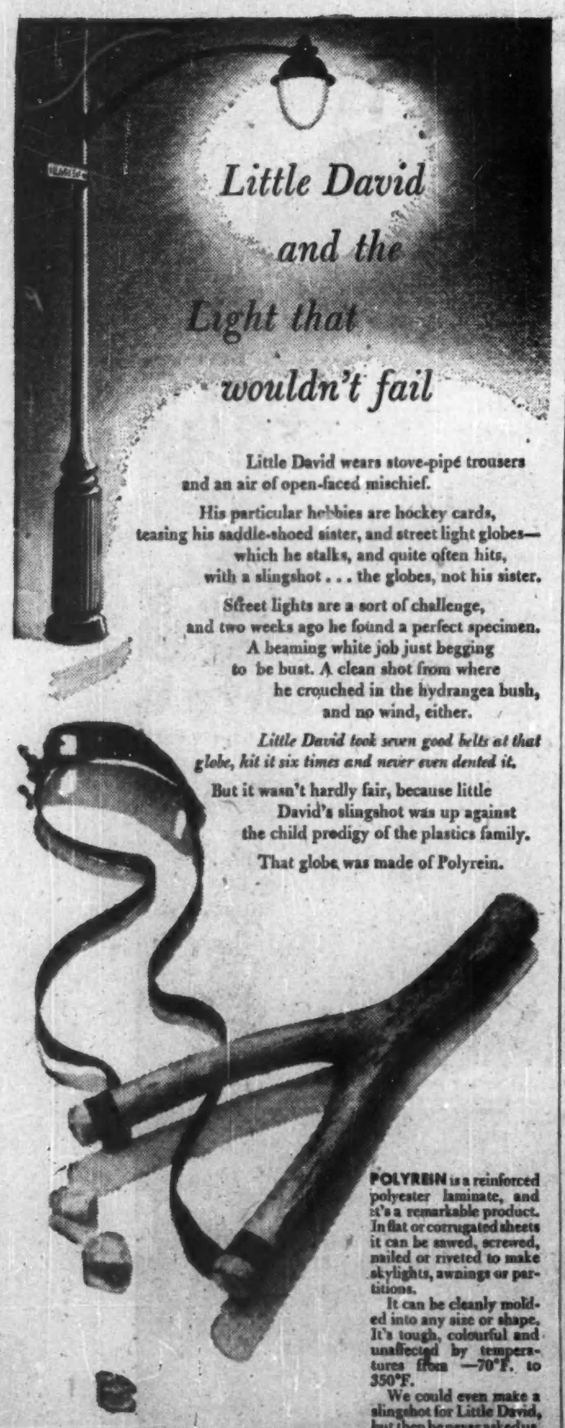
Little David
and the
Light that
wouldn't fail
Little David wears stove-pipe trousers and an air of open-faced mischief.
His particular hobbies are hockey cards, teasing his saddle-shoed sister, and street light globes—which he stalks, and quite often hits, with a slingshot . . . the globes, not his sister.
Street lights are a sort of challenge, and two weeks ago he found a perfect specimen. A beaming white job just begging to be bust. A clean shot from where he crouched in the hydrangea bush, and no wind, either.
Little David took seven good belts at that globe, hit it six times and never even dented it.
But it wasn't hardly fair, because little David's slingshot was up against the child prodigy of the plastics family.
That globe was made of Polyrein.
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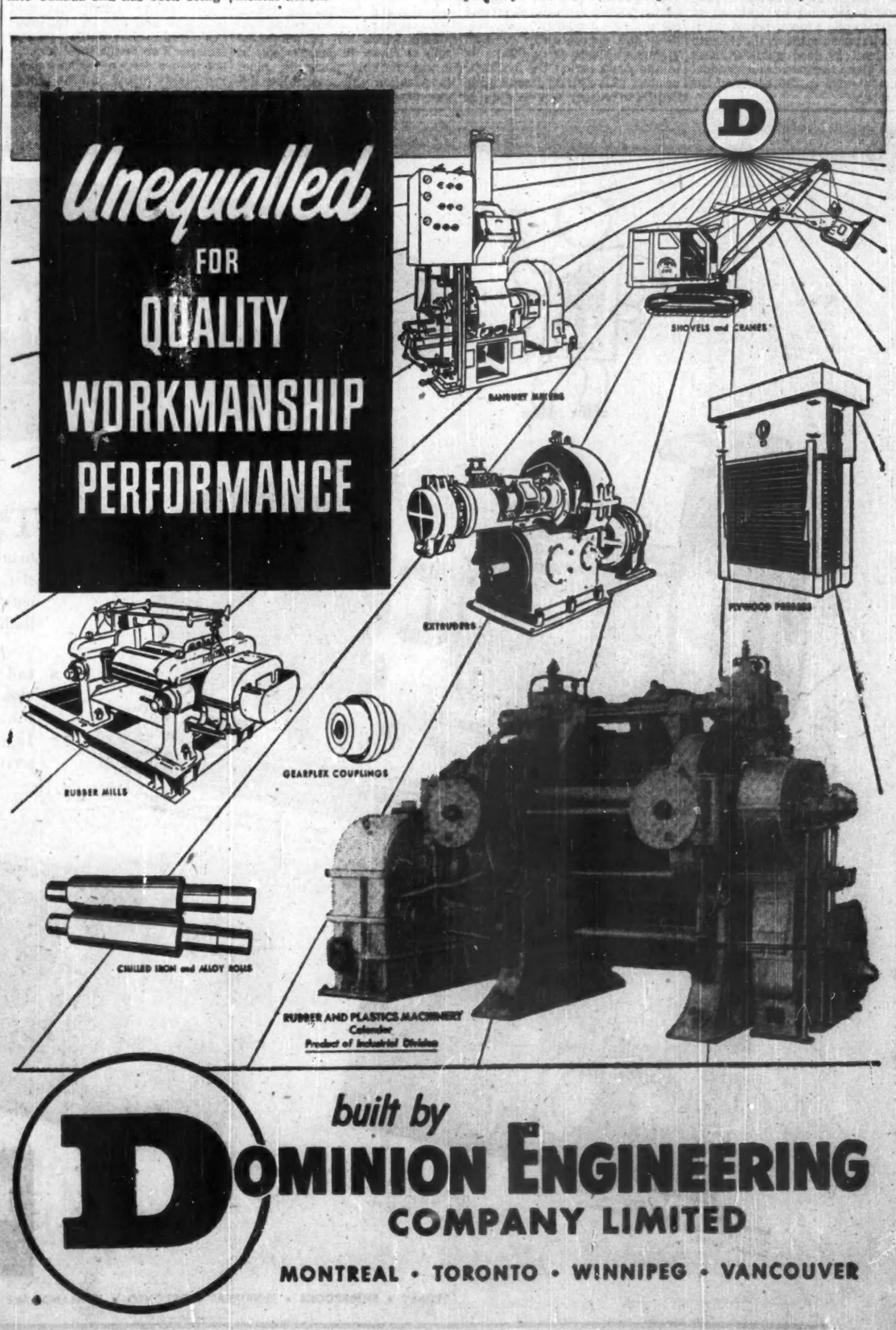

Chemistry Wages Unrelenting War On Pests

New Products Launched Or Ready From All Major Chemical Firms This Year

Whomping up a chemical that will lay low a bug or destroy a weed, is a relatively simple matter, entomological chemists will tell you. The tricky part comes when you have to make the chemical satisfy at least three other conditions:

Be harmless to the host plant or vegetable.

Be difficult for the insect or weed to build up resistance against.

Have little disrupting effect on the natural enemy of the pest.

Finally, it must be made of raw materials that are in relatively free supply and are low-priced enough to stand sizeable rail hauls and lay down at reasonable rates.

Satisfying all these conditions is a chemist's nightmare, involving prolonged experimentation testing in both laboratories and field strips, sometimes stretching over three years or longer. After that time government agencies, operating under the Pest Control Act, do their own extensive testing before granting registration certificates to the chemical for specified uses.

Things have changed a good deal since shortly after the war when new pesticides were hitting the markets at the rate of about one a week. Entomologists have found out much more about the whole subject of pesticides; have discovered that strange things happen when the workings of nature's own selective agencies are disturbed. With the aid of a new chemical tracer element they have been able to follow the action of a herbicide throughout a plant and have thus been able to attack the problem with much greater effectiveness.

One of the many pesticide applications. Six guns from three different levels on this CNR spray train spew deadly mist on brush and weeds along the railways right-of-way.

Stiff Competition

Generally higher operating costs, increasing competition, have tended to induce companies to concentrate on one or two good bets, subjecting them to more painstaking testing, before announcing market debuts. Thus the pattern of success is a little more marked now:

Take du Pont's new, nonselective herbicide — C.M.U. It is said to kill all grass and weeds. Following an original application effectiveness is said to persist into the third year in test strips in the U. S. Since it can control all green growth around oil wells, between railway ties, along roads, on tennis courts, etc., its market potential is considerable. In all of these cases, the fact that the chemical sterilizes the soil as well does not particularly matter.

M.C.P.—a European competitor to 2,4-D—may make some inroads into the Canadian markets this year. In certain cases it is a little more selective than 2,4-D.

M.C.P. is said to have no effect whatever on the surrounding grain. At the moment, however, M.C.P. is considered a little high priced to demand much of a market in the prairies, the big market for this type of herbicide.

Alanap—Naugatuck Chemicals product—is a new development in weed killers, a pre-emergent herbicide which kills most annual weeds before they sprout. Applied within 48 hours of planting, Alanap provides protection to cucumbers, peas, beans, corn, potatoes, soybean without damage to the crop.

Endrin—a new Shell Corp. insecticide—is showing great promise against a number of tests which have been unaffected heretofore by either Aldrin or Dieldrin. Endrin is said outstanding in control of forest tent caterpillars, a troublesome pest in many parts of Canada.

Maleic Hydrazide — another Naugatuck product—is a growth inhibitor which has received considerable publicity for its use in grass control. Sprayed on grass when it reaches a height of three inches, growth of the grass is stopped while the grass remains perfectly healthy.

New Product Parade

All the big chemical firms in the pesticide field have either launched or are about to launch, new products.

But 2,4-D and D.D.T. are still the big guns in this industry. Together they account for more sales volume than all the other pesticides together. Currently 2,4-D formulations are accounting for close to half the entire dollar sales of pesticides in Canada. D.D.T. formulations comprise some 14% of the total. At the moment there is every indication that sales volume of both these items will be up again this year despite the fact that Canadian formulators are having to share the market increasingly with both European and U. S. importers this year.

It looks now as if a record 15 million acres will be sprayed with 2,4-D this year on the prairies. That represents around a $4.5 million market. Prairie acreage treated with this herbicide has jumped from around 500,000 in 1947 to 13.5 million in 1952. On top of that some one million acres were sprayed in Eastern Canada.

In Eastern Canada railway companies, hydro-electric firms, highway departments, will launch the biggest weed spraying program in history. Formulations of 2,4-D and its sister chemical, 2,4,5-T, will be most widely used for weed and brush control. Scope of the now famous spruce budworm spraying projects by air in New Brunswick forests was even greater this year.

Although pesticides is one of the fastest growing branches of the chemical industry—now well over $15 millions annually as compared with practically nothing 15 to 20 years ago—competition has become very keen this year with some domestic formulators forced to take losses on stocks if sold at current prices.

Heavy production and disappointing sales volume in the U. S. last year left producers there with very heavy surplus stocks. With overseas export markets reduced sharply as foreign plants came back into operation, more and more U. S. pressure—both prices and supply—has been brought to bear on Canada's small industry.

Price of technical grades of D.D.T. have been cut in half; 2,4-D has been sliced by around 20%. Since domestic formulators have no tariff protection from the huge, well-developed industry to the south, they have had to follow suit with price cuts to stay in competitive range.

Tariff walls against imports of Canadian pesticides into the U. S. on the other hand are still prohibitive despite a 50% G.A.T.T. cut two years ago (23%-25% plus 4c a pound) on some of the big volume items. At the moment U. S. competition is particularly keen in the Maritimes, the Prairies and B. C.

One of the difficult aspects of this industry is predicting product demand, since it can vary widely according to weather, degree of pest infestation, etc. Several years ago, for instance, there was an unexpectedly heavy infestation of wheat aphids in Manitoba and insecticide supplies had to be flown to the affected areas. But great strides are being made by the entomologists in ability to forecast degree of infestation almost a year ahead of time. In many cases insect infestation runs in cycles. By following the life stages of the insect, from egg to adult, by soil counts, etc., the entomologists can aid the pesticide formulator greatly in helping him have adequate supplies of material available in the right places at the right time.

One of the biggest headaches of all to confront chemists—one that is eating up a steadily increasing number of research dollars yearly—is how to overcome the resistance that some insects and to a lesser extent weeds have been able to build up to even the deadliest chemical killers. To make matters worse, the degree of resistance seems to vary from locality to locality.

For instance, D.D.T., which was 100% effective against all houseflies a few years ago, now only slows the insect down in certain areas. The same thing has happened in the case of mosquitoes in some areas outside of Canada.

Research Results

Worried entomologists have gone to work on this most complex problem of all. But they feel they are now on the right track. They have found that by enzyme action certain insects have found a way to detoxify deadly D.D.T. One U. S. scientist has developed a strain of houseflies that thrive on D.D.T. The entomologists hope that from their study of the resistant insect they will be able to find his weak point and develop another deadly poison that he is not able to detoxify. It has been noted that resistance has developed fastest in those insects which have a number of generations in one year.

The trend toward increasing crop specialization in parts of Canada has meant a growing market for the pesticide industry. Specialization brings concentration of insects, e.g. tobacco, corn, soybean in districts of Southwestern Ontario. The progressive food growers in each district come to depend on the aid of the pesticide chemist.

There are now some 2,000 different kinds and brands of pesticides registered in Canada (about 55% of insecticides, 8% fungicides, 3% insecticide-fungicides and the remainder made up of herbicides and rodenticides). A federal department, operating under the Pest Control Products Act (administered by Plant Products Division of the Federal Department of Agriculture), deals with application for registration of new pesticides in Canada and for wider use of already registered products. For instance both Aldrin, one of the best control insecticides, and Dieldrin have been registered for wider use this year; Aldrin for control of root maggots in various crops and Dieldrin for use as spray on Manitoba's sugar beet crop.

Although a widening variety of basic chemicals is being used as raw materials for the pesticide formulators in a constant fight against weeds and insects the top items are still chlorine, benzene, alcohol and sulphuric acid. All of these chemicals are in the best supply position they have been since the end of World War II.

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Western Chemical Milestone

First Production Of Chlorine, Caustic Soda

Another chemical milestone for Alberta—and all of Western Canada—will be first western production of chlorine, caustic soda and muriatic acid from the new $3.5 million plant of Western Chemicals Ltd. at Duvernay, Alta.

The plant—expected to come into operation by late summer—is a self-contained unit, obtaining its raw material, salt, from wells drilled to extensive salt beds lying beneath the site, and its power from natural gas wells in the immediate vicinity.

The plant will have an ultimate capacity of 20 tons of chlorine, 24 tons of caustic soda and 10 tons of muriatic acid a day. Initial operations, however, will be at the rate of some 5,000 tons of caustic soda and 4,000 tons of chlorine a year.

The availability of these chemicals, so basic in a broad range of manufacturing processes, along with the dozen or so new chemicals being made available from the new Edmonton plant of Canadian Chemical Co., is expected to stimulate other chemical developments in the province. Some of the caustic soda output, will likely be used in one of the major processing steps in the Canadian Chemical Co. plant.

A battery of generators driven by natural gas engines will provide the electric power required for electrolysis of the brine. This operation, carried out in specially designed cells, produces the chlorine and caustic soda. Natural gas is also used to provide the steam necessary to concentrate the caustic soda liquors to commercial strength in multiple effect vacuum evaporators.

Electricity for general use and to provide power for compressing and liquefying the chlorine gas for shipment will be produced by steam driven turbo-generators, which will also serve to reduce steam pressure prior to use in the evaporators. Operation of plant will require large quantities of cooling water, and a pumping station capable of handling some five million gallons per day, from the North Saskatchewan River, is being installed. An eight mile rail spur to the CPR line at Two Hills has been built and is in operation.

Plant design and management of the project are being carried out by the Engineering Division of J. T. Donald & Co., Montreal. General contractor is C.H. Whitham Ltd., Edmonton.

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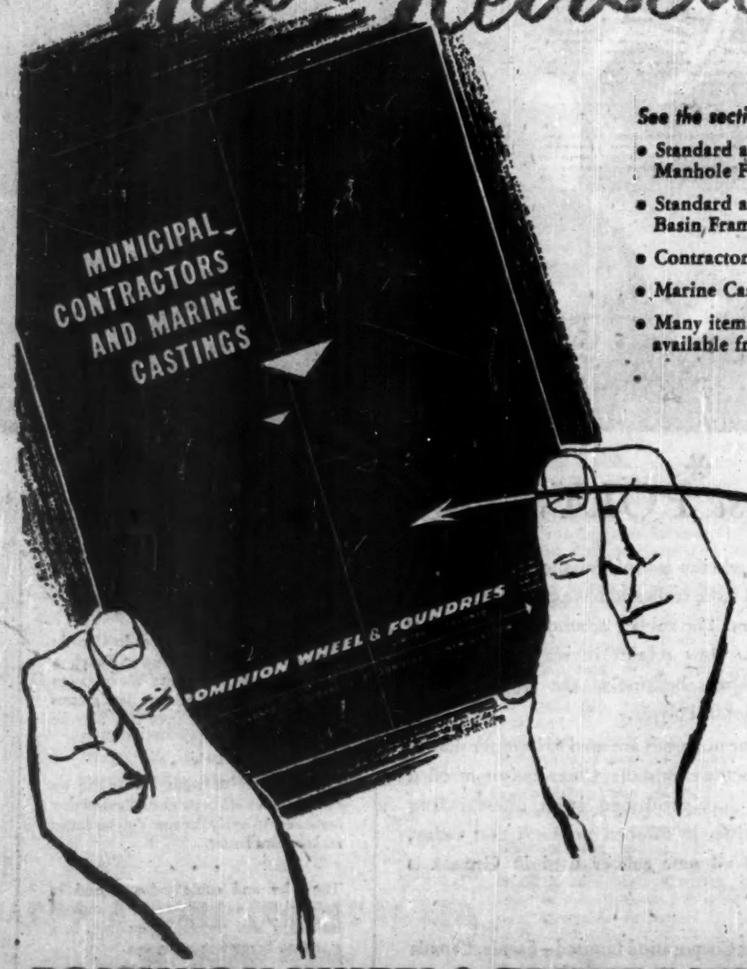

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Farmer's Silent, Powerful Partner

The Big, Expanding Role Of Chemistry In Food Growing

There are a set of figures that are just as much cause for concern as the threat of war — the statistics on the world acreage of cultivatable land, in relation to world population.

In North America there was some 3.25 acres of cultivated land per person in 1920; that had dropped to 2.50 acres in 1940, to 2.25 by 1950. If the present rates of population growth and food consumption keeps up, acreage will be down to 2 per capita by 1960.

This means that to keep the world's stomachs full, the soil is going to have to keep producing at peak yields on a factory-like basis. Like plant machinery which must be ready to start on a new production cycle when the next shift comes on, so the soil must be prepared to start its creative food cycle all over again once the last crop has been harvested.

To keep it doing so will be increasingly the challenge to the chemist — the silent partner in the food-growing industry. The magic of his laboratory translated into multi-million ton fertilizer output from his chemical factories will become the difference between abundance and food shortages, paying crops and crop failures.

Growing Business

This is a big business now—$78 millions a year in Canada — but it's going to be a lot bigger. The pattern is clearly etched against a background of rising farm costs and mounting food demand from expanding world population. It is evident in all parts of Canada, from the potato grower in the Maritimes to the fruit grower in the Okanagan Valley, B.C.

For the tobacco grower in Essex and Kent counties in Southwestern Ontario, chemical fertilizer has become as established a crop factor as seeds, labor, etc. Ontario farmers who a couple of years ago were tentatively using some 200 lb. of fertilizer to the acre of corn to get it over the difficult late summer "sag" when starch is being built up in the plant, are now stepping up the application to 800-1,000 lb. per acre.

More and more Prairie farmers, impressed by Fertilizer Board tests which have shown increased wheat yields of around seven bushels to the acre from application of 48 lb. of mixed fertilizer at a cost of $2.20, are swinging into the fertilizer picture.

Once a farmer starts using fertilizers he will invariably keep doing so, chemical men claim. The most conclusive evidence in favor of our products, they say, is this: bulk of the steadily increasing consumption of plant food in Canada is being accounted for by long-term users and invariably these are the most progressive farmers in the community. "They'll tell you that they can't afford not to use fertilizer," a fertilizer distributor stated.

All together these farmers, fruit growers and market gardeners, spread about 750,000 tons of chemical fertilizers over their fields and orchards last year. That is about double the amount they used ten years ago.

A "Question" Year

But 1953 is going to provide the answer to a question which has long been disturbing the chemical fertilizer industry. Farm prices have been declining for over a year now and income is off appreciably. Will the average fertilizer user start cutting purchases as a result?

Already the answer is taking shape, and from a survey of manufacturers and selling agencies across Canada that answer appears to be no. It looks as if there will be some slight reduction in over-all tonnage in Eastern Canada but because of the trend towards higher analysis fertilizers, consumption of actual plant foods is running about parallel with last year.

The steadily expanding sales pattern in Western Canada which started back in the 1930s when Consolidated Mining & Smelting Co. first made fertilizer products available to the Prairies, is still keeping up. Sales are running 8% to 10% higher again this year and the Prairie market has now grown to a position where it is currently using about 1/3 of total Canadian fertilizer consumption —or around 110,000 tons annually.

To keep up to the growing Prairie and Western U. S. export market, C. M. & S. — largest producer of plant food in North America — will soon bring into operation a $9 million fertilizer plant at Kimberley, B.C. To produce some 70,000 tons annually of ammonium phosphate, the plant will be situated within easy rail distance of most of the phosphate deficient soil areas of the Pacific Northwest and right on the edge of the heavily-cropped younger prairie soil areas.

C. M. & S. enjoys one of the most successfully integrated chemical operations in the world. It brings in its phosphate rock from its own mine in Montana and reacts it with sulphuric acid made in its own plant from iron sulphides present in tailings from its Trail metal smelter. Last year this greatest Canadian exporter of chemicals sold almost 500,000 tons of fertilizers to the U. S., Hawaii and Philippine Islands.

Demand on Upswing

Demand is growing heavily in all these areas. C. M. & S. officials claim they could readily market their entire production in the three export outlets. With no tariffs to hurdle and most of the fertilizer plant expansion in the U. S. taking place further east and south. C. M. & S. enjoys a very competitive position in the West Coast market.

Further east at Fort Saskatchewan, near Edmonton, Sherritt-Gordon will be bringing into production its $17 million chemical-metallurgical plant by year end. The plant will use a revolutionary new chemical processing technique for extraction of nickel, copper, cobalt, from company's Lynn Lake ores. Using ammonia made from natural gas as a leaching agent the company will turn out some 65,000 tons annually of ammonium sulphate along with some 10-15 tons of extra ammonia daily. Plans are to market bulk of the fertilizer in the U. S. West Coast area, along with a smaller portion in the "Greywood" soil belt of the Northwestern Prairies.

Ammonium sulphate output — as coke-oven byproducts — is expanding rapidly as new batteries of coke-ovens come into operation in the current Canadian steel expansion program. With an over-all boost in steel capacity of at least 30% it is expected that output of coke-oven ammonium sulphate will increase about the same amount. Despite the extra output, already demand in Eastern Canada is currently running considerably ahead of supply. One or two of the steel companies have even started importing U. S. ammonium sulphate to help meet customer requirements. There are also indications that some imports will be brought in shortly from Germany.

Why the big demand for ammonium sulphate? It is just another evidence of the trend towards higher analysis fertilizers with particular emphasis on nitrogen. Nitrogen was one of the most important of plant nutrients; it's what promotes lush, leafy foliage in plants. Unfortunately it is also the most rapidly depleted plant food from the soil and although inexhaustible supplies are present in the air only very few plants can utilize it as such. Therefore the manufacturer of nitrogen compounds — ammonia, ammonium nitrates, ammonium phosphates, ammonium sulphates — represents a major slice of the fertilizer industry.

So heavy is the future demand outlook for ammonia in the U. S. that the Department of Agriculture has suggested necessity for a production increase of 100% by 1955.

New Canadian Plant?

A major Canadian chemical company — Dominion Tar & Chemical — is currently considering construction of a plant at Montreal East to turn out some 150 tons of ammonia a day. Such a plant would be a big factor in keeping up to rapidly expanding demands for nitrogen in Eastern Canada.

Dow Chemical of Canada has been co-operating with the Ontario Agricultural College and government agencies in investigation into the various aspects of applying anhydrous ammonia to the soil, directly. Dow has established a fellowship at the Ontario Agricultural College and advanced studies are being conducted into the engineering and fertilizer aspects of this new development. First ammonia in Canada to be applied directly to the soil on a commercial basis will be done this summer in Southwestern Ontario.

Since direct application of ammonia to the soil skips one processing stage common to mixed fertilizers it can be laid down around 20% cheaper than any other form of ammonia. There is another consideration, however, since special application equipment must be used in spraying the gas onto the fields.

One of the major trends in Eastern Canada accounting for the rapidly growing consumption of ammonium fertilizers is its use as a top dressing for fall wheat. Demand this spring, for instance, was even heavier than usual since much of the fall wheat had been winter-damaged.

Another trend eating into available nitrogen supply is the rising demand for the fertilizer for use as a side dressing for corn. In this use the nitrogen mostly in the form of ammonium nitrates is applied to the ground alongside the corn drills in late summer. This helps provide the plant with its high nitrogen content during the difficult producing stage when large quantities of nitrogen are used up. Fertilizer officials claim 200 lb. of ammonium nitrate will give an extra 20 to 30 bushels of corn. Officials also see a big undeveloped market in this country in uses of ammonium fertilizers in pasture lands and hay crops to maintain high grass and clover yields.

Other Plant Foods

The two other most important chemical plant foods are phosphorus, processed as super and ammonium phosphates from imported phosphate rock and potassium chloride or sulphate.

All mixed fertilizers are designated by the proportion of amounts of the three basic chemical foods, nitrogen first, phosphoric acid next and potash third. Because of the rising cost of transportation, bags, for shipping and farm costs generally, the demand is for more concentrated mixed fertilizers. This means less filler and less transportation per unit of plant food shipped.

Provincial Advisory Fertilizer Boards with representatives from agricultural schools, associations, producers and government, meet several times a year to decide on fertilizer formulations and make recommendations for the next year. Last year the recommendations were responsible for stopping production of two of the more popular lower analysis fertilizers.

One of the more interesting newer developments in the fertilizer field is application by airplane. Still in its infancy in Canada, the plan is expanding rapidly in the central and western section of the U. S. where wheat growing is done on a large-scale basis. Some aircraft firms specializing in this business start in the southern states early in the year and gradually work north with the season.

The shortness of the spraying season in Canada — since our farmlands are situated on a west-east line rather than north-south as in the U. S. has been one important deterrent to rapid development of aerial spraying.

The fertilizer industry is made up of some eight producers of basic fertilizer chemicals — including the three chief steel producers and two coke-gas companies, (one in Hamilton and one in Montreal.)—and some 32 mixing plants. The mixing plants buy all their chemicals from the domestic, U. S. or European producers and then mix them into their own formulations in specially designed mixing plants. Several of the large meat packing firms maintain their own fertilizer mixing plants.

The Big Producers

North American Cyanamid which makes ammonium nitrate at its Welland, Ont., plant; Canadian Industries Ltd. which makes super phosphate at its McMasterville, Que., and Hamilton plants; and C. M. & S. which makes ammonium nitrate and ammonium sulphate at its Trail and Calgary plants comprise the big chemical producers.

The steel and coke companies produce ammonium sulphate as a byproduct of their steel, and gas making operations. Basic nitrogen fertilizers produced by the two giants of the industry, —C. M. & S. and North American Cyanamid — makes up Canada's main chemical exports. Last year these totaled around $40 millions.

Give The Lawnmower A Rest, Let The Chemist Take Over

Home owners, relax.

That little plot of rapidly growing grass you call home need no longer be a nightmare. Science has solved the problem of the grass-cutting week end.

First is was a lawnmower operated by remote control. But then you had to stay awake to push buttons at certain intervals. Now you don't have to do even that because with an application of M-H—can stand for merry holiday or maleic hydrazide (the technical name)—your grass just slows down and forgets how to grow. All you have to do is oil your lawnmower once a month to keep it from getting rusty.

M-H promises to be what the harassed home owner has long dreamed of—something that will keep the grass from growing yet not impair its fresh greenness. But it can also be a boon for departments of highways, golf courses, universities, hospitals, etc., any organization with acres of rolling grassland to look after.

This year, for instance, the Ontario Department of Highways has applied M-H in large quantities in test strips on the Queen Elizabeth Way. If it proves up to the manufacturer's —Naugatuck Chemicals — advance notices, then highway departments, all over the country are likely to become big annual purchasers. The cost will look small when compared to the expense of cutting grass all summer.

M-H is also being used experimentally this year in the Southwestern Ontario tobacco fields to keep down suckers on the main stems of tobacco plants. Growers want all the growth to be directed into the leaf. It has similar applications for many flowering plants and shrubs.

A good deal depends on the correct amount of application. Too much can stop growth—permanently. Results will vary too with type of grass and climatic conditions. Naugatuck, who has been testing it quietly now for several years both in Canada and U. S. feels it has come up with something big. Other chemical firms are quickly getting into the field with "growth inhibitive" products of their own.

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What They Now Know For Sure About Soil Conditioners

It is now over a year since agricultural chemists marketed a brand new product — soil conditioners. Some dozens of formulations marketed by different firms have hit the market since that time.

Research work carried on in the interval by leading chemical manufacturers, university and governmental bodies have proved the promotional character of some of the wild claims made for these conditioners. At the same time, however, it has also confirmed beyond a doubt that conditioners can be an important aid to the market gardener, nurseryman, the farmer, the home owner.

What They'll Do

Field tests carried on all across Canada and the U. S. have pointed out fundamental facts about use of soil conditioners:

—Best results are observed in soils of high clay or silt content, but improvement of some very sandy soils can be obtained under some conditions.

—Soil must be cultivated before, during or after application of conditioners. It is impossible to obtain good results by just applying the conditioner to the unprepared surfaces.

—Sufficient conditioner must be applied to produce the best effect. The amount varies with the condition of the soil and the type of crop being grown.

—Use only well proven products from long established chemical manufacturers.

Secondary Benefits

—It is generally accepted now that soil which has been cultivated and treated with a conditioner retains its porous friable character despite extensive excessive moisture or the baking effects of hot sun. This in turn results in important secondary benefits including improved workability, faster seed germination, faster early growth, improved drainage, decreased erosion, etc.

Price reductions of 30% to 35% on some of the more important formulations this spring has resulted in wider use by homeowners and market gardeners. There is every indication that, as in the pattern of most new chemical products, the price trend will continue downward.

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Nuclear shoe soling is one of the many new and improved products made possible by Polysar materials. In its 120-acre petro-chemical plant at Sarnia, Polymer research technicians are constantly testing, combining and evolving new Polysar materials to provide better qualities for existing products—and bases upon which to create new products.

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Almost 100% of inner tubes in Canada are now made from Polysar Butyl, a material with far higher air-retention values than natural rubber. The success of the new tubeless tires can also be traced to this quality.

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Expanding Array Of New Paint Bases

Latex and Alkyd Resins Are Top Contenders In The Race

Two protective chemicals—latex and the alkyd resins—will be struggling for a sizeable share of the estimated $120 millions that Canada's paint and varnish production will be worth this year.

These chemicals, which have virtually revolutionized the industry over the last few years, are the top contenders in an impressive growing array of protective paint and varnish bases.

The latex-base or "rubber" type paints last year grabbed off a $2.5 million share in a remarkable sales boom—12-15% of all consumer-sale paints. This year the alkyds will hold a comfortable lead, some observers insist.

What do the manufacturers themselves think?

Most agree that the battle will be a close one, and that the markets for both types of paints will boom in the process. Many manufacturers believe, however, that the alkyds market will grow faster.

The latex paints are here to stay, they say, but they're tending to bet on the versatility, durability and wide solubility of the alkyds.

The battle is a happy one all around, since this year likely will be the most profitable in history for the whole industry.

The "Rubber" Paints

In 1939 Canada's paint and varnish production sold for $25 millions. By last year the sales had soared to $110 millions.

To meet the enormous demand for latices, the Crown-owned Polymer Corp. at Sarnia last year went into production on the "rubber" paint bases—the first time they had been made in Canada.

Commented Polymer: "A latex suitable for use in rubber base paints . . . is now being produced and sold in large quantities and promises to exceed in importance any of our other special types of rubber.

"This new field is of sufficient importance to justify specially designed laboratory facilities and the best tools that modern science can provide, such as an electron microscope. . . ."

Dow Chemicals, also at Sarnia, will be spending $1 million this year to compete against Polymer in the latex field.

Alkyd Resins

Just what are the alkyds? They're resins formed by processing glycerin or pentaerythritol, phtalic anhydride and vegetable oils, lending excellent durability to protective paints.

The latest development is the use of alkyd resins in flat wall paints, giving them unusual resistance to scrubbing and scouring. Because of the large polymers in these alkyds, which resist penetration, these paints don't need primers and they recoat well.

The manufacture of alkyd resins has boomed. The plants of Reichhold Chemicals and Canadian General Electric are the country's largest producers. But in addition to their production and that of Woburn Chemical Co., Imperial Varnish and 17 paint manufacturers (who make their own alkyds), another $800,000 worth was imported from the U. S. last year.

The sound and fury of profitable market battles already has had its effect below the border. Reliable observers reported that two "large" U. S. paint manufacturers (unidentified so far) will establish plants in Canada shortly.

Epons, Vinyls

Manufacturers may be concentrating their attention, for the moment, on the latices and alkyds, but they're also keeping a sharp eye on two increasingly important protective chemicals: the Shell Oil epons and the vinyls.

On the distant competitive horizon, the manufacturers see the promising silicones, acrylics and styrenes. These bases are "fair bets" for future big sales development, but still relatively far away.

Some manufacturers are looking on the silicones as a real "wonder product." Commented a spokesman: "The silicones offer a greater potential in the paint and varnish field than any other material I know."

The silicones (pioneered by Dow Corning Chemicals and CGE) are a strange family, indeed. They're a highly stable group of silicon-and-oxygen molecules, distantly related to quartz.

There has been nothing quite like them before. "Silicones are molecular structures made to order for different jobs," one spokesman explained.

Chemists (at Dow Corning), for example, created a particular silicone molecule to do one job: insulate copper wire. But it took them seven years.

Heat, Weather-Resistant

In paints, silicones resist heat, moisture and weather-wear. They can be handled like most organic resins, although they're not organic at all.

Dow Corning, for example, claims that silicone paints can stand up to 1,200 deg. F. without cracking or checking. They're ideal, the firm says, for jobs such as protecting diesel exhaust piping, boilers or ovens.

Silicones are expensive, and none of them is made in Canada at this time. But Canadian paint men foresee a bright hope for silicone paints in another silicone product—silicone rubber.

Silicone rubber is simply a form of silicone with rubber-like qualities—not rubber treated with silicones. Why then, ask the paint men, can't we make latex-base paints out of silicone rubber?

Wouldn't this produce an odorless, easily applied "rubber" paint—plus the heat- and weather-resisting properties of the silicones?

In spite of all the radical changes in paints, the industry points out that the proportion of sales hasn't changed at all. Canadians are buying more paint, but it's all relative.

The largest percentage of Canadian-made paints (40%) still goes for industrial finishes. Twenty-five per cent is still sold to painting contractors; 20% for industrial maintenance; and the smallest (15%) to the general public.

"Sales have increased quantitatively, not qualitatively," commented M. J. Palmer, editor of Canadian Paint and Varnish Magazine (Maclean-Hunter).

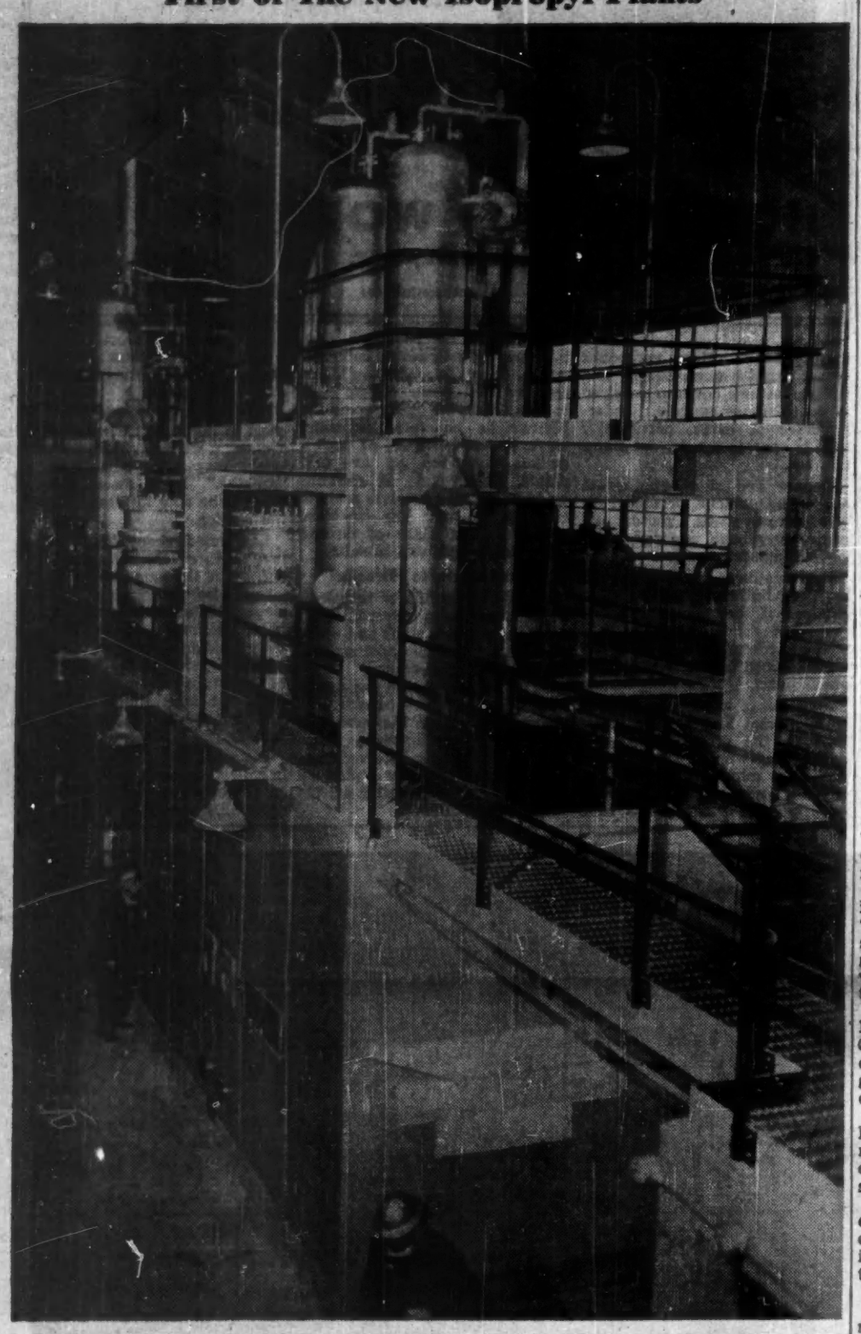
In other words, paint sales are booming right across the board, not in specialized fields. This, say the experts, is a good thing.

Throughout the industry expansion is keeping pace with sales. Here are a few of the later developments:

Macdonald & White Varnish & Paint Co. has opened a plant in the Windsor area to produce the "Tartan" line. Size: 12,000 sq. ft., 14 employees.

Benjamin Moore & Co. opened a new factory in Montreal's suburban Ville St. Michel to produce alkyd paints. Size: 16-acre site, 23,000 sq. ft. of floor space.

First of The New Isopropyl Plants



First Canadian production of isopropyl alcohol — with its broad range of industrial uses — came from this $3 million petrochemical plant of Shell Oil Co. of Canada at Montreal East in April. The plant can produce 12 million lb. of isopropyl, 8 million lb. of acetone, and may later turn out associated chemicals.

What's New

Oil Additive

A new fuel oil additive which acts as a dispersant and stabilizer for distillate fuel oils, has been introduced in Canada by Canadian Industries Ltd. The new additive not only retards the formation of insoluble residues but reduces the size of the particles, thus practically eliminating the possibility of clogging of fuel lines, screens and filters of domestic oil burners and diesel engines.

The new product makes it possible for a refiner to blend catalytic cracked stock with a straight-run product without sacrificing stability in the blend.

Being ashless, the additive is particularly suitable for use in blended fuels for diesel engines. The new additive was developed in the petroleum laboratories of E. I. du Pont de Nemours in U. S. and is marketed in Canada by C-I-L's tetraethyl lead sales department.

• • •

Plastic Tape

Production of a new high quality industrial tape from plastic vinyl film has just been announced by Monsanto Canada Ltd. The tape is said to display a number of advantages over the standard tapes used for coil and cable insulation, oil-filled transformers, protection against corrosion of underground piping, weatherheads, etc.

The tape is said exceptionally flexible, has high strength and excellent elongation for winding over irregular surfaces.

The new product will be manufactured and sold by Barringham Rubber & Plastics Ltd., Oakville, Ont., a Monsanto subsidiary.

BRITISH AMERICAN OIL CO. issued 3,882 capital shares during May, upon conversion of debentures due Aug. 1, 1961. There are 7,967,599 shares outstanding.

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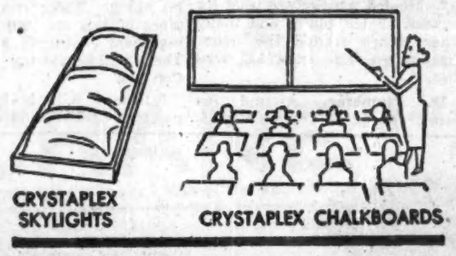

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DEPARTMENT OF ECONOMIC AFFAIRS, Legislative Bldg., Edmonton, Canada
Hon. A. J. Hooke, Minister. Ralph R. Moore, Deputy Minister

Construction Is Expanding Field For Chemist

What's Ahead, What's New In The Field

Construction is not a chemical process, and at first glance chemistry seems to have little to do with it.

In construction, members of various sorts are for the most part combined mechanically with one another to form structures, or in some cases are built up into things like roads. What chemical action does take place on site, like the setting of cement, does not require the assistance of chemists.

However, before materials come to the site considerable chemistry may be involved. Most obvious use of chemistry is its role in testing various materials —metals, asphalts, and the like— to control their quality.

But many of them are derived from chemical processes. Metal refining itself involves much chemistry, but is not conventionally thought of as a chemical industry. (Though extraction of ores by metals from ores by chemical leach processes is on the increase, and may change even this).

A number of building materials are provided fairly directly by the chemical industries. Some examples:

1. Paints and other protective coatings. This heading includes waterproofings and water repellents.

2. Wood preservatives—these may be only protective coatings or may impregnate the whole material.

3. Lighter building materials. An example is plastic resin laminated on glass fibre. They have many architectural and decorative uses.

4. Heavier building materials. One company is introducing a substitute for concrete which involves use of cement, wood waste and secret chemicals. It has had wide success elsewhere. It is not literally "heavy," but is used for major construction roles like walls and floors.

5. Pitch for roofs may be obtained from coal tar distillation, something close to the very heart of chemical industry. Asphalt used on Canadian roads is most commonly obtained from oil refineries, cousins of the chemical industry.

6. Adhesives. Plywood's need for waterproof glues gave the adhesives industry great importance for construction. Now, for the first time, formaldehyde, used to make one of the most important adhesives for this purpose is being made in Canada.

7. Light-admitting materials. Some of the lighter materials mentioned above—translucent or transparent plastic building sheets—come in this classification. Glass itself is produced by a chemical process, though its production is not considered part of the chemical industry.

8. Insulation. If glass can be considered a chemical product, chemistry is providing a growing amount of glass fibre insulation to go in walls. Synthetic resins are used to coat rock wool insulation.

9. Molded plastics are used for sockets, switch plates and many other things around the home. Plastics are also used for wall tiles.

10. Plumbing. Around the corner appear to be the plastic-and-glass bathtub. Maybe wash basins, toilets and other fixtures of the materials too. Maybe even piping to service the fixtures.

Polyester resins are laminated on Fiberglas to give an extraordinarily strong material. But it is so light that a bathtub can be lifted with one hand.

Already here and starting to take hold is plastic piping (not laminated, that is) for use in plumbing. Water can freeze in pipes of this sort without bursting them — they'll just stretch. There will be savings in installation too.

Silicones will bulk large in paints, varnishes and enamels in the future. Just entering the market here, they give unusual endurance to weather and other attackers. (They're also important in water repellents.)

Water based latex paints continue to be a keynote in home decoration. Now, for the first time, latex which is needed for the paints, is being made in Canada.

Odorless paints — otherwise of the ordinary sort—are being put before the public too.

A manufacturer is beginning production of alkyd paints, another up-and-coming item.

Wood preservatives should be more widely used, say makers of those products. Many verandahs rot underneath unnecessarily and have to be torn down or repaired at considerable expense. Understructure of barns, particularly sills, is open to serious deterioration too.

Copper and zinc naphthanate are being widely promoted as wood preservatives. Creosote and pentachlorophenol are two other leading preservatives.

Preservatives can be applied by hand, but better protection is obtained if they are forced into the wood under pressure. This method ordinarily involves treating the wood before it is used or put in place.

Main use of wood preservatives is in things like bridges, poles sunk in the ground and other engineering work.

A new mineral building material intended to be used as a substitute for concrete has been taken on by a Canadian company which intends to make it at Montreal by next year. It has been used with success in Europe. Like lightweight concrete in many ways, it can, however, be sawed, drilled, cut with an axe and nailed like wood. It contains wood waste, and involves a secret chemical process. The customer will get it in slabs of desired thickness, length and breadth.

Allow Bricks to "Breathe"

New brick buildings that look as if they were covered with frost are an unfamiliar and unattractive sight. This appearance is caused by "efflorescence."

Brick is porous, and the newly laid bricks contain considerable water. It moves to the outside of the wall and evaporates. Since the water has salts dissolved in it, evaporation gradually builds up a layer of whitish salts on the side of the building.

Key to this problem is preventing water from getting into bricks in the first place.

New compounds make this easy: at the same time they form a water repellent coating on the brick, they allow the brick to "breathe." It is most essential that air be able to move through the coating.

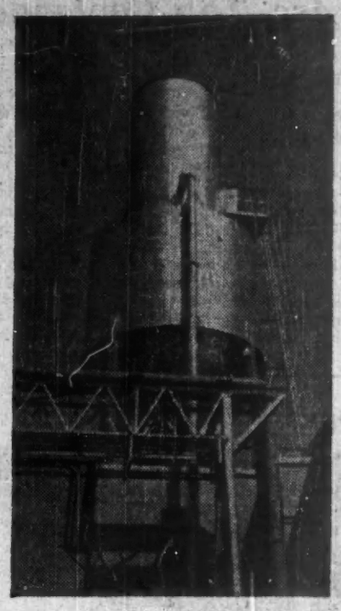
Laminated sheet for building use, made on the same principle and from the same materials, is already becoming a construction staple. Sheets are corrugated or not, as desired, and allow light to pass through. Skylights, awnings, partitions, side walls and a host of other uses are made of the product. At least three companies are now making such sheet in Canada.

A wartime plastic material, completely transparent, and used in bomber windows, is also used for similar purpose.

Plastic Body For The Auto of Tomorrow?

Will tomorrow's automobiles have light, strong plastic bodies? Walter Wenninga sits at the wheel of the first "plastic car" produced in Canada, under his direction, and standing at right is M. F. Anderson, general manager of Naugatuck Chemicals, whose vibrin plastic, reinforced with glass fibres, was used in making the body.

HORTON WELDED TANKS



for Alcohol Plant

The cone-bottom bin shown at the left was built for the Commercial Alcohol Limited's plant at Gatineau, Que. It is for the storage of powdered, hydrated lime, used in the processing of the waste sulphite liquor from which alcohol is produced.

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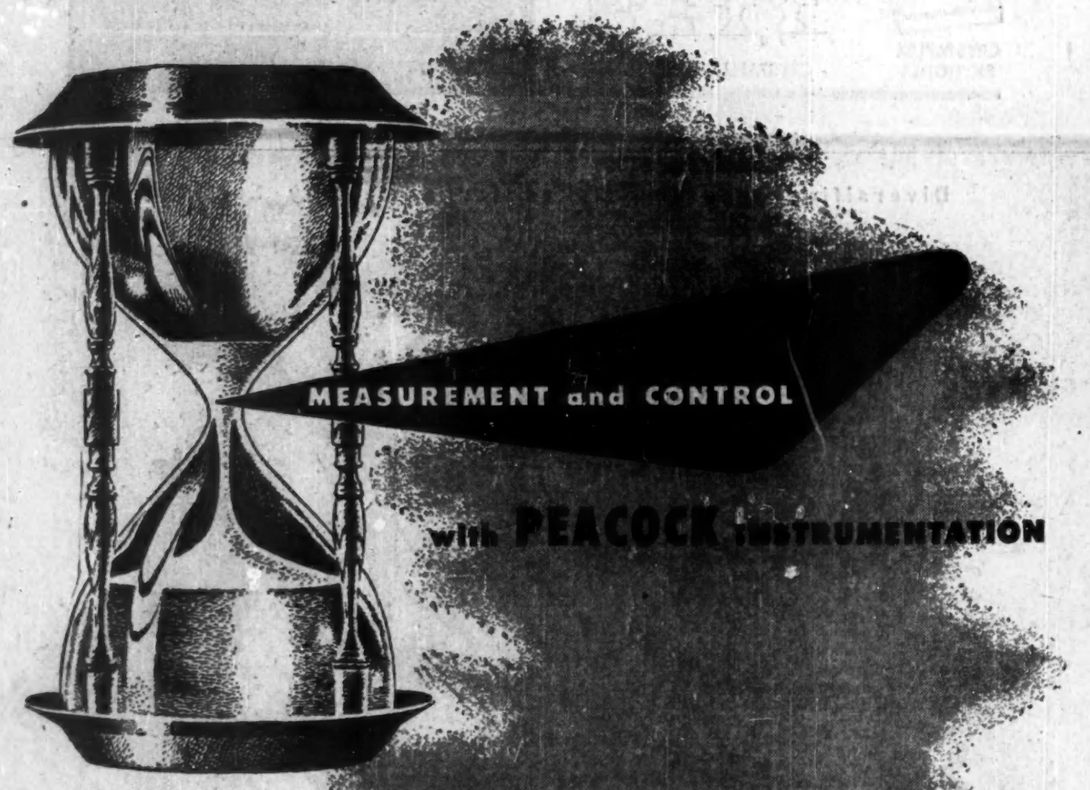

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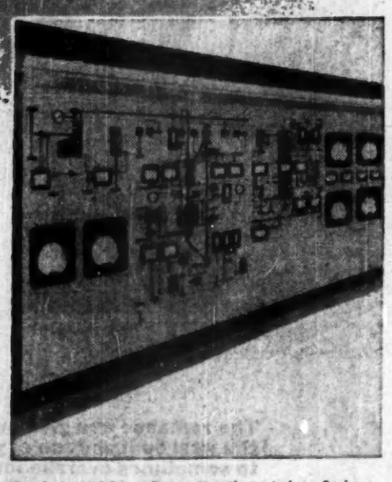
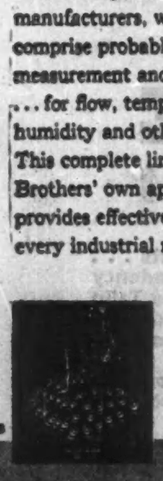


The last word in modern automatic control — Foxboro Model 40 and Model 50 controllers on graphic panel of new T.C.C. unit. For graphic or conventional design panels — Peacock offers the latest in instrumentation.



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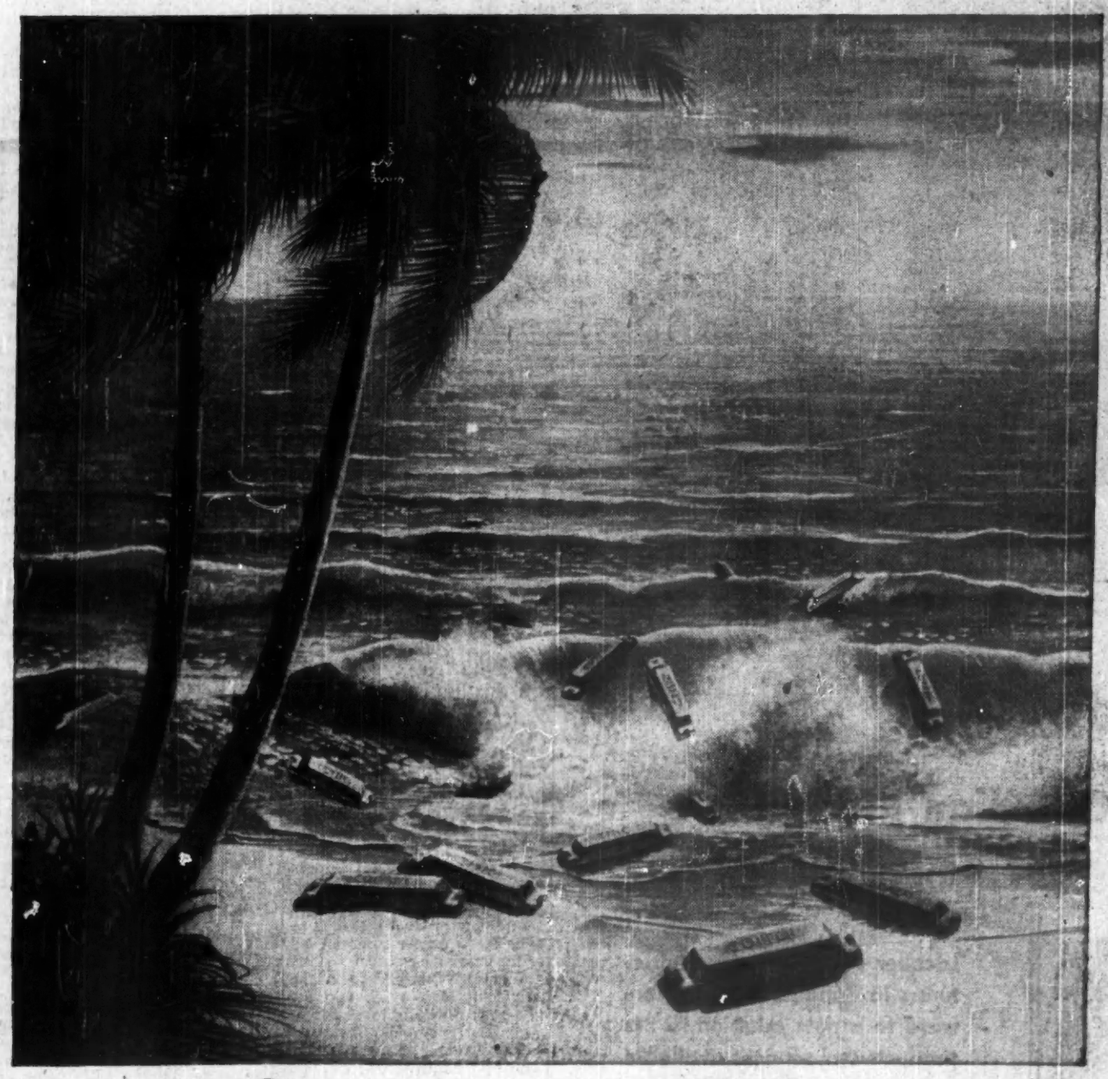

Treasures ON THE FOAM

MINERAL TREASURES—tiny particles of zinc, lead, copper or molybdenum compounds—collect on the foam of air bubbles stabilized by a frother. This is ore flotation. It permits the separation of one mineral from another, prepares them for refining at the smelter.

To make ore flotation more efficient, mineral mills use a *selective* frother—like methyl isobutyl carbinol. By changing the lifting power of the air bubbles, MIBC permits them to carry the desired mineral particles to the surface where they can then be skimmed off for the smelter.

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How Chemist's Role In Mining Grows

Chemical Processes Rapidly Replacing 'Fire Refining'

More and more the mining industry is becoming closely identified with the chemical industry.

Tomorrow's metallurgical plant is going to look more like a chemical plant with chemical processes replacing "fire refining" and belching chimneys.

What's it all going to mean to the chemical industry?

The news chiefly looks to be favorable.

Many new leach processes will require large quantities of chemical reagents which the industry will be glad to supply.

And the chemical products to be turned out by the mining industry will be largely cheap raw materials the chemical industry may well use in more advanced processing. Chemicals produced by many of tomorrow's metallurgical plants will be used in the plant's own processes and will thus not actually enter the usual supply and demand picture.

Mining men are aiming at the logical objective of recovering every mineral constituent which can be recovered at a profit. They will, in a sense, emulate the packers' scheme of utilizing "everything but the squeal" in hog processing.

Capital expenditures for new-type chemical plants may often run much larger than for the so-called conventional type of smelting and refining plants. But indicated operating costs have already been found to be much lower. And the economics of ore processing are undoubtedly heavily weighted in favor of chemical processing.

Heavy Research Costs

An excellent example of this situation is provided by Sherritt Gordon Mines. Sherritt will have spent $2,508,000 for research on its process (including pilot plant expenditures) by the time its new Fort Saskatchewan refinery swings into action late this year. However, the process is expected to result in the recovery of nickel from nickel concentrate at a cost "rather less than half that which would have been incurred had conventional smelting and refining processes been used."

By using the ammonia pressure leach process instead of conventional processes the net advantage to Sherritt should be some $2.5 millions a year. Thus the total expenditure on research and development is expected to be recovered in a year's time.

In the case of Sherritt, the metal reduction plant which will treat some 80,000 tons of concentrate per year will cost less than a combined smelting and electrolytic plant having an equal capacity.

This revolution in mineral processing along chemical lines, of course, will be a very gradual one and will cause a minimum of dislocation. There is too great an investment in conventional smelting and refining facilities for mine managements to plan scrapping these tomorrow. But where installation of new plant facilities is concerned, managements are invariably giving attention to new style mineral processing.

With much of investigations still in the research stage, the curtain has only been drawn back on a part of process know-how developed in the chemical or "leaching" field of mineral recovery. It is already demonstrated, however, that processes may have a wide variety. The Sherritt Gordon process is an ammonia leach process and requires large quantities of ammonia (to be produced by the company from Alberta gas).

Many uranium ores can be treated almost equally well by acid or carbonate leaching and in such a careful study of costs is required. As large quantities of acid or caustic soda are required, prices of these two products are important items.

Uranium Processing

Most Canadian uranium ores require treatment by leaching methods in order to obtain a high recovery of uranium. However, certain ore deposits are known that contain quite large amounts of low grade uranium, too low grade to be economically treated by leaching of the entire ore. Preconcentration of such ores is possible with leach processing still carried out.

Silicious uranium ores, containing a relatively low amount of acid soluble gangue are definitely suited for acid leaching. Uranium ores containing a large amount of acid soluble minerals such as carbonates, earthy hematite, etc., are definitely suited for carbonate leaching.

Eldorado Mining & Refining has been successfully using a leach process on tailings retreatment at Great Bear for some time. Now a new multi-million dollar caustic-soda leach plant has been swung into operation at the company's Ace mine at Beaverlodge which will be America's greatest single source of uranium.

Quebec Metallurgical Industries will place a considerable reliance on leach processing at its proposed plant on B. C. tidewater using Yukon-B. C. power. Conventional smelting will be used for most basic raw materials but leaching will be used for recovery of refined nickel and cobalt. Leaching will also be used at the QMI-managed Cobalt Chemicals plant at Cobalt, Ont., for recovery of refined metal. The type of leach processes to be used in these plants has not been disclosed.

In Sudbury, where conventional facilities have been chiefly the rule in the past, both International Nickel Co. and Falconbridge have been carrying on leaching research—and leaching will soon be used on Sudbury ores.

Inco has investigated both acid and ammonia leach processes and has decided to use an ammonia leach for its proposed stepup in nickel output by two million pounds monthly. Iron oxide production and an increased output of SO_2 will be other results of the application of the process.

The process—which will require large quantities of ammonia—will involve the application of the ammonia leach to pyrrhotite for the recovery of refined nickel, leaving the iron oxide as a residue. Not only is the ammonia leach process more efficient but there is also an improvement in nickel extraction.

Falconbridge recently designed a new process designed to eliminate relatively barren pyrrhotite before ore goes to the smelter. This process does not involve a consumption of chemicals, it's understood, but iron oxide is expected to be a by-product. If sulphur is turned out, it will not be in the elemental form, but as SO_2.

Upgrading Ores

Chemical processes for recovery of valuable minerals are becoming almost legion. The Mines Branch of the Department of Mines & Technical Surveys has developed a leach to upgrade lower grade ilmenite ore of the Allard Lake and other Quebec areas to a grade of 95% titanium dioxide.

This may be a most valuable step along the way to working out a cheap process for turning out titanium metal. Quebec Metallurgical Industries has a whole string of new processes, many of which are probably chemical or semi-chemical in their application.

There is a process for making ferro-manganese by double reduction of ores high in iron content. A titanium process is now being investigated using larger equipment. An available process may be used for production of alumina.

The size of the expenditures proposed by Gunnar Gold Mines suggests that a leaching plant is proposed rather than the alternative of a gravity circuit which would give a much poorer grade product.

Discovery of new mineral deposits of large size in this country are undoubtedly prompting consideration of further leaching investigations.

The huge lead-zinc-tin-copper deposits of Brunswick Mining & Smelting Corp. in New Brunswick suggests the basis may exist for "chemical empire" due to accompanying sulphur and iron. Now the second huge discovery of Anacon and St. Joseph Lead Co. suggests that a twin development to that of Brunswick M. & S. may develop.

The columbium-tantalum-uranium occurrences of Inspiration Mining & Development Co. in the North Bay area have presented somewhat of a challenge to the metallurgist. But many of the ores which have been found difficult to treat by previously accepted methods have responded to leach research and North Bay could conceivably become location for another important plant.

Where The New Chemicals Are Born

Behind the application of chemicals to everyday life is the magic of the test-tube and patient research of scientists in laboratories of the major companies, such as C-I-L's Central Research Laboratory at McMasterville, Que.

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Chemist Is Important Ally In Keeping Our Rail Lines Open

Casey Jones is getting new help from the chemical industry this year. To make sure that Casey has a clear view right down the main line, chemistry has introduced new weapons for the railways' war on brush and weeds.

Vegetation not only hinders the view of level crossings. It interferes with communications and signal lines, it hampers drainage, reduces the life of ties, fouls the ballast, increases fire hazard, presents an unattractive appearance and otherwise raises the cost of track maintenance.

To kill this growth, Canada's railways each summer send out weed and brush spray trains. Depending upon locality, spraying starts about June 1. Weed spraying must be completed by mid-July, although brush killing can be carried on until the end of September.

This year, both Canadian National and Canadian Pacific are stepping up their brush killing programs. For the first time this year, the CPR is making extensive use of a low volatile herbacide described as a 50-50 mixture of 2, 4-D and 2, 4, 5-T. Ontario's Hydro-Electric Power Commission hit upon this combination after testing a wide range of brush killers.

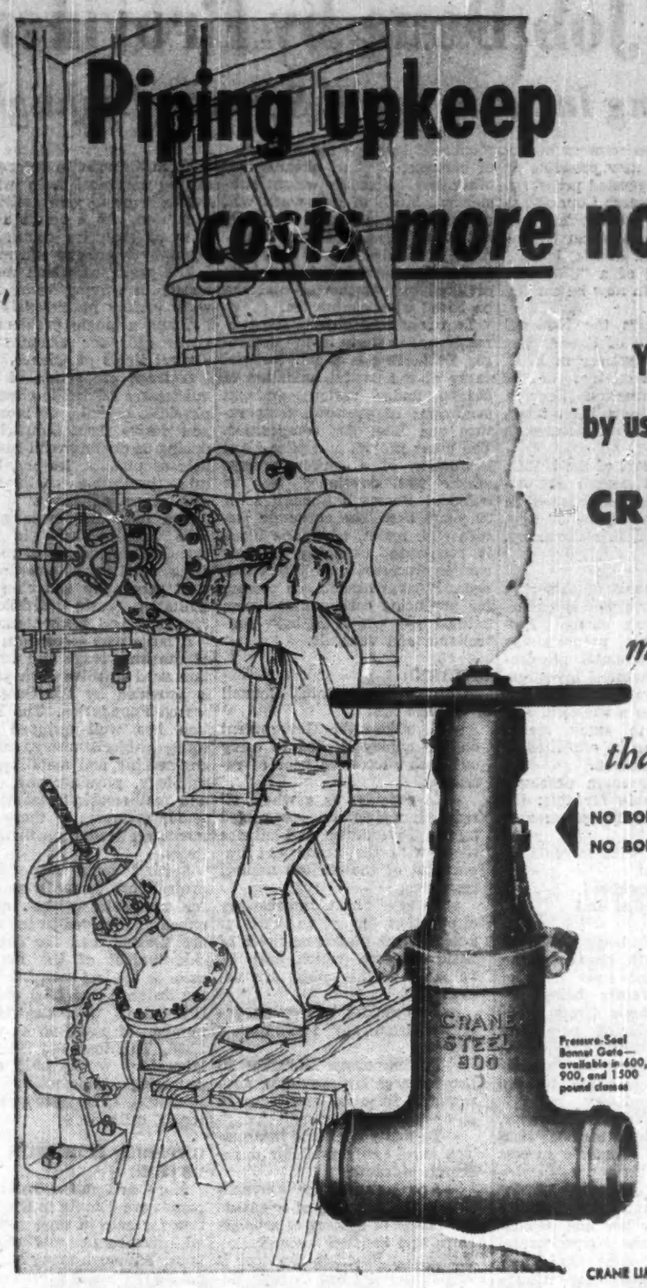
Hydro engineers found that 2, 4, 5-T was the most effective, but too expensive for undiluted use. The 50-50 mixture with 2, 4-D, however, has been found both economical and effective, and both railways have now followed the Hydro's lead.

Undoubtedly the best permanent weed killer, a CPR engineering officer told The Financial Post, is CMU. This is a urea compound, being marketed this year in Canada by C-I-L for the first time, after two years of testing. So far, the railways are still conducting their own tests of CMU and state that at least two more years will be required to determine how long soil sterility is maintained.

CMU's selling point is that it kills all vegetation and completely sterilizes the soil. But it costs much more than competitive killers—a big consideration with the economy-conscious railways.

This year, as in most other years, Western Canadian lines require more treatment by the weed spray trains than those in Eastern Canada. The Canadian National this year is spraying a total of 8,940 miles of track with weed killer and 1,800 miles with brush killer. Corresponding figures for the Canadian Pacific are 9,000 and 199 miles. Cost of the CPR's weed killing program is estimated at $497,000 for this year.

Railway policy is to spray main lines yearly, most branch lines every second year, and other branch lines when money is available.



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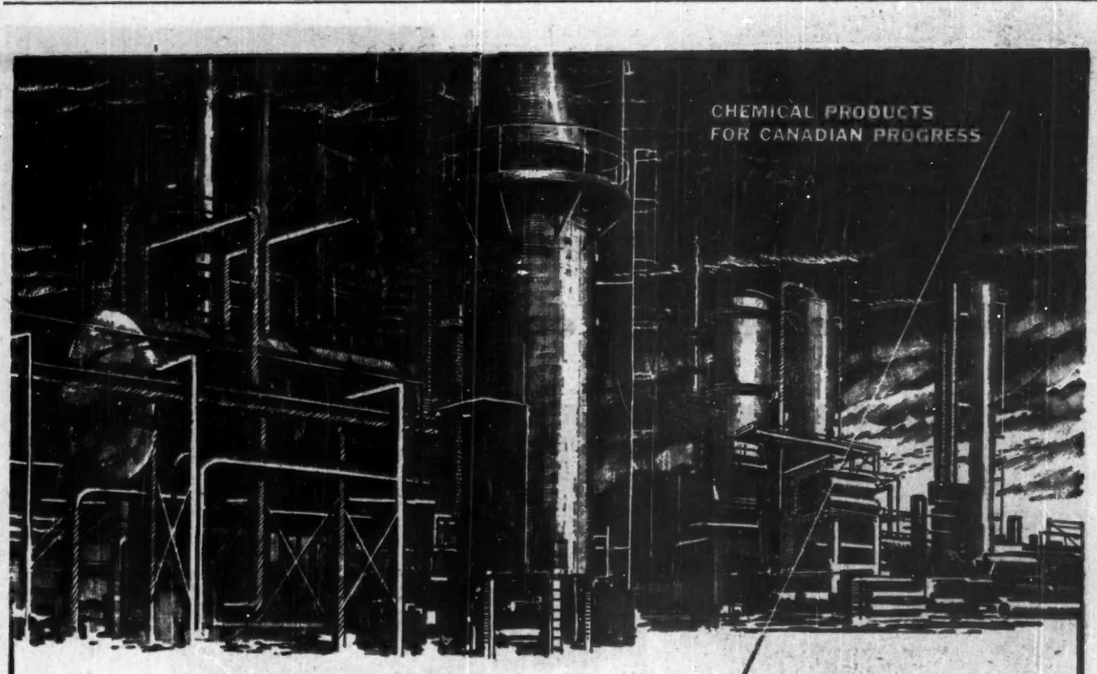

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Big Research Job Done by Provincial Research Councils

How They Are Helping Industry In All Spheres, Highlights of The Work They Undertake

Across Canada federal and provincial organizations are dealing with hundreds of problems; some of them are problems for fundamental research, sometimes stretching over several years, others are the day-to-day problems of small business. Some of the work is exciting, with tremendous potentialities, some is dull and routine. But all is typically Canadian.

Here are the highlights in the research work being done by the different provincial research bodies.

BRITISH COLUMBIA:

Rapid expansion in the work of the British Columbia Research Council is being marked by a large increase in technical staff, a corresponding increase in physical plant, and a steady extension in its technical services.

During the past year there have been many new appointments, especially in the field of physical metallurgy, metallic corrosion and chemistry. At the same time, the new building which was opened early in 1952 has already been outgrown and an extension which effectively doubles its accommodation will be opened next month.

In the field of corrosion protection, large marine and irrigation installations valued at over $1 million are now safeguarded by Council-designed protective systems.

In the field of biological control, Council biologists have been active in the study of marine borer damage to sawlogs. Large rafts are sometimes many months in transit to the mill and often they are seriously damaged by marine borers. This is a new and difficult problem and one with a peculiarly Western Canadian origin.

The problem of reducing the odor nuisance from sulphate-pulp mills has now reached the stage of engineering design and there are indications that the day may not be far off when the liberation of the well-known kraft-mill odor will represent a distinct monetary loss to the manufacturers.

A survey of water quality in the Fraser-Thompson River system, begun some years ago, has been completed and a report prepared for the Dominion-Provincial Board, Fraser River Basin.

The Council chemists are more and more being called upon to assist local manufacturers in the development of new products or evaluation of suggested processes.

The B. C. Research Council has now been made an associate laboratory of the Canadian Standards Association. Tests leading to the granting of a "CSA Approved" label can now be carried out in the west.

For some years the National Research Council of Canada has maintained an engineer in B. C. as field representative of its Technical Information Service. This work has now been taken over by the B. C. Research Council.

With the support of the N.R.C., a number of Research Fellowships have been established in the field of physical metallurgy, corrosion and organic chemistry.

ALBERTA:

Research Council of Alberta's coal research program is undergoing considerable change. Emphasis is being progressively shifted to fundamental physico-chemical and chemical investigations designed to explore the potential of coal as a chemical raw material and to study means whereby this can be exploited in the industrial pattern.

Basically, five main processes are now available for this: the raw or chemically pre-treated coal can be

(1) extracted with solvents,
(2) carbonized,
(3) partially oxidized,
(4) hydrogenated and
(5) gasified.

In each case, large yields of valuable aromatic chemicals can be obtained; and since most of these are currently being obtained by synthesis (from products isolated during petroleum refining), they would supplement rather than compete with chemicals normally provided by the petrochemical industry.

In the Council's view, however, only the first three methods hold out promise of economic success at the present time.

The Fuels Laboratory of the Council is engaging upon studies of solvent extraction and carbonization, and the experimental work is being done along new lines. For example, long-term investigations are being planned of solvent extraction of coal in supersonic fields.

Carbonization of coal is being studied under environmental conditions likely to reduce the high yield of comparatively valueless pitch and increase the properties of benzene, styrene, phenols and other low molecular weight substances. Much of this work will require many years to complete; but it is hoped that it will ultimately establish a body of knowledge upon which novel individual exploitation of coal can be based with confidence.

Two research projects are currently under study in the natural gas field. One is a fundamental study of the partial oxidation of butane under various ambient conditions of pressure, temperature and inlet gas composition. The other project is a pilot plant evaluation of a carbon process which was developed by the National Research Council some 20 years ago. The economic picture with regard to carbon black is constantly changing as new rubber processes come into existence. What is needed is a process for producing carbon black from natural gas which is both controllable and versatile.

ONTARIO:

Aims of the Research Council of Ontario are:

—To advise the Government on the money needed to carry out each successive year of research;

—To consider as a whole all research undertakings supported by the Government and balance them with the needs and importance of the various natural resources;

—To see that unnecessary duplication in research is avoided and that some fields of basic research which may be valuable to the public are not neglected;

—To consider advice on research from any informed source;

—To encourage industry to use research by providing government financial assistance in co-operative programs;

—To make scientific information more easily available to research workers;

—And to assist the universities in the training of scientists by means of system of scholarships and assisted research.

Industrial Research Services is a department of the Ontario Research Foundation organized in 1947 to encourage industries in the Province to use research and to apply scientific techniques to their problems of production. The province provides the funds for the operation of the department. Field engineers visit the industries in Ontario to inform them of the technical help which is available or to give assistance if requested. As a result a steady flow of inquiries comes to the office by telephone and mail.

The problems which the I.R.S. assists in solving come from a wide variety of industrial activity, and a single problem sometimes calls for examination in several fields of science.

A large proportion of the inquiries are related to chemistry—physical, organic, or inorganic—and derive from industries producing or dealing with such products as plastics, leather, textiles, inks, protective coatings, pulp and paper, adhesives.

The food and canning industries require help in many branches, including microbiology, disease and parasite control, physical geography and climatology, sanitation, waste utilization, bacteriology, and fermentation.

A large part — perhaps 80% — of the knowledge and investigation used to solve such problems is provided by the Ontario Research Foundation. The Foundation has well-equipped laboratories in biochemistry, chemistry, engineering and metallurgy, parasitology, physiography, textiles, and mathematical statistics. The senior members of these departments are leaders in their special fields.

Several long-term industrial projects are presently under way for companies whose individual expenses involved in the research are greater than the entire outside budget of the Foundation prior to the last war. During 1951, for instance, the total number of firms dealt with was 2,612, the number of visits to clients was 2,336. This involved 801 cases of laboratory work, 1,010 cases of providing information already available, 1,735 introductory and repeat calls.

ONTARIO RESEARCH FOUNDATION:

More and more Ontario companies are coming to the Foundation for help in their raw material, processing or marketing problems. Although many of the companies are small a growing number of large manufacturers are coming to depend on the Foundation's services.

Considerable specialized work is continuing in the field of wood chemistry. The separation and identification of the components in the essential oils in a representative group of Ontario trees was carried further during the year.

A small group is working on the general problem of discovering basic information regarding the chemistry of the lignin sulphonic acids which are the main constituents of waste sulphite liquor, and methods of conveying these compounds into materials which have commercial value. Effects of chlorination on these acids have also been studied.

Attempts have been made to produce resinous compounds which could be used as "binders" in industry, and also compounds which have an affinity for proteins and could replace to some extent the vegetable tanning materials which are largely imported.

Work is continuing on waste sulphite liquor. It contains sugar and other compounds which have not been isolated or identified.

The Foundation is also investigating the pulping of white birch and its paper potentialities.

Work has been carried on in an effort to pin down the cause or causes of flavor reversion in certain oils and their products. an attempt has been made to isolate and identify the various linoleic acids which are formed during the hydrogenation of cotton seed oil.

QUEBEC:

The Agricultural Research Council of the Quebec Department of Agriculture promotes and subsidizes research in schools of agriculture at Laval, Montreal and McGill universities; it does not undertake any research work itself.

During 1952-53, the Council granted 43 scholarships, of which 14 holders were registered in Canadian universities and 29 in foreign universities. Eight of the

(Continued on page 44)

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Is Industry Doing Enough Research?

Is Canadian industry failing to pull its weight in the field of industrial research? What is being done, what should be done to put Canadian business in a stronger competitive position? Here is what Dr. R. K. Stratford, president of the Research Council of Ontario and for many years head of research at Imperial Oil, has to say:

By DR. R. K. STRATFORD

Those companies which are large enough to warrant research organizations of their own should establish one in this country, even though they are affiliated with a parent company in another country.

This would not only benefit Canada, but would also be a spur to improving the quality of research carried on by the larger units. What we should emphasize in Canada is not the number of people, but rather the quality of research being produced.

To this end I would like to see a large number of small research units in operation rather than a few large ones. And in order to protect and to assist the small industries throughout the country, I would recommend that they form research associations of their own and, where desirable, co-ordinate their activities with government in setting up group research projects.

Today there is very little industrial research being carried on in Canada by companies operating within the country.

Probably in all, not more than half a dozen companies have what could properly be termed research organizations. The rest of industry could be divided into two types—those who are affiliated with larger companies outside the country, either in the United States or England and draw upon the scientific information from these companies, and independent companies that either do not consider that they need a research organization of their own or are too small to support one and must depend upon three sources for their scientific information.

They receive counsel and advice from the technical sales staffs of the larger companies with whom they deal and this is by no means an insignificant contribution.

Government departments are a source of much information, particularly the National Research Council and in Ontario the Ontario Research Foundation (a partially endowed institution) who are familiar not only with scientific literature related to industrial research but do an appreciable amount of applied research themselves.

Under the auspices of the Research Council of Ontario, the Ontario Research Foundation has a small group of technical people operating an industrial research service which has been of great benefit to the smaller industries within the province.

In addition to the foregoing, there is another type of research that has been conducted very successfully in England and a number of other European countries and is known as group research.

In such cases, a number of industries, interested in producing similar products, agree to come together and support research of mutual interest. Group research has been practiced since the end of the First War and today there are over 40 such groups operating under the Department of Scientific and Industrial Research.

The Research Council of Ontario has at its disposal government funds which can be invested in research similar to that being conducted in England. These funds may be spent on a dollar for dollar basis, i.e. the government giving a dollar for each dollar contributed by industry.

The Provincial Government of Ontario, through the Council, has started a small number of such group research projects and it is hoped that these will be greatly expanded in the coming years.

In the case of industrial research, the first step which should be taken is to make sure that the existing industries are making the best use of the personnel and facilities available in their various research organizations throughout the country.

This could be accomplished by a closer liaison between industry and the research facilities which exist within the country.

There is no doubt that far more progress could be made if industry were willing to contribute directly to the development of new ideas.

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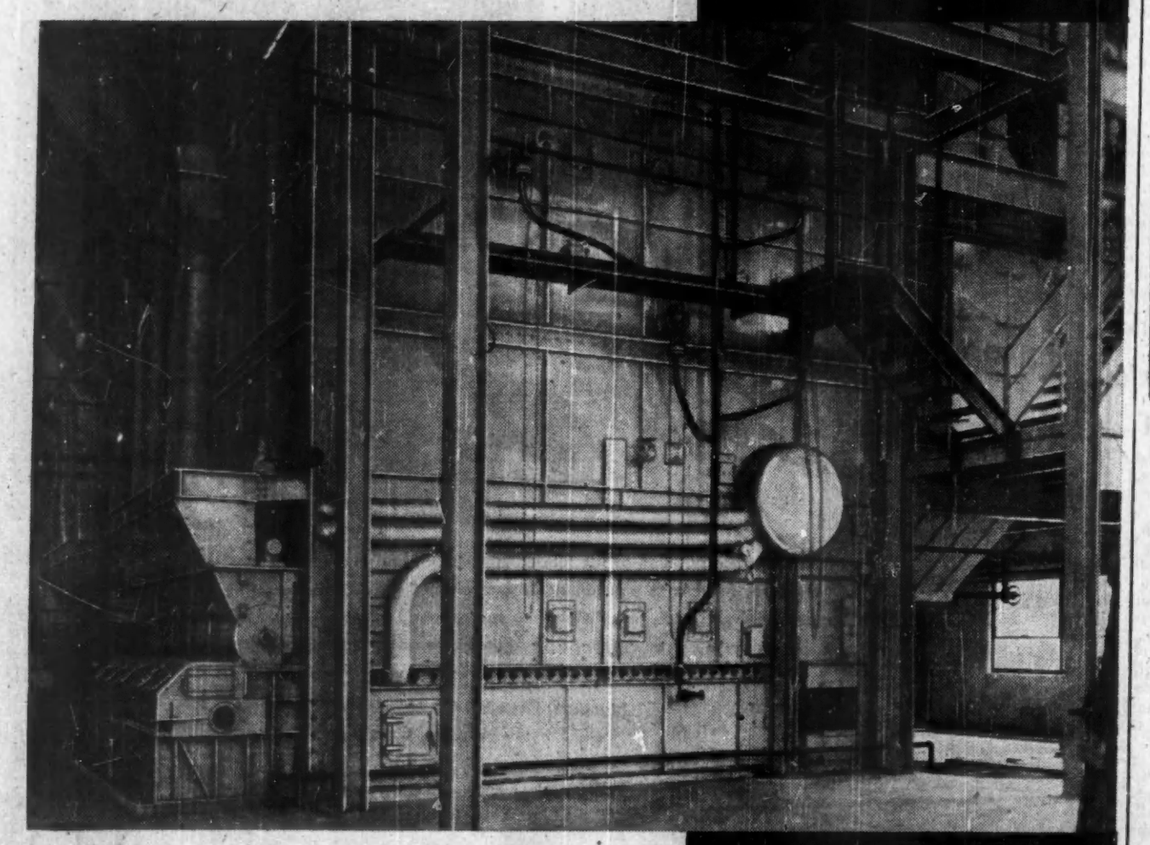

Above illustration shows two Type G "INTEGRAL-FURNACE" Boilers, designed capacity 57,000 lbs/hr. at 175 lbs. pressure, and superheated to 650°F. complete, with continuous loop economizer and travelling grate stoker, suitable for burning Comox fuel.

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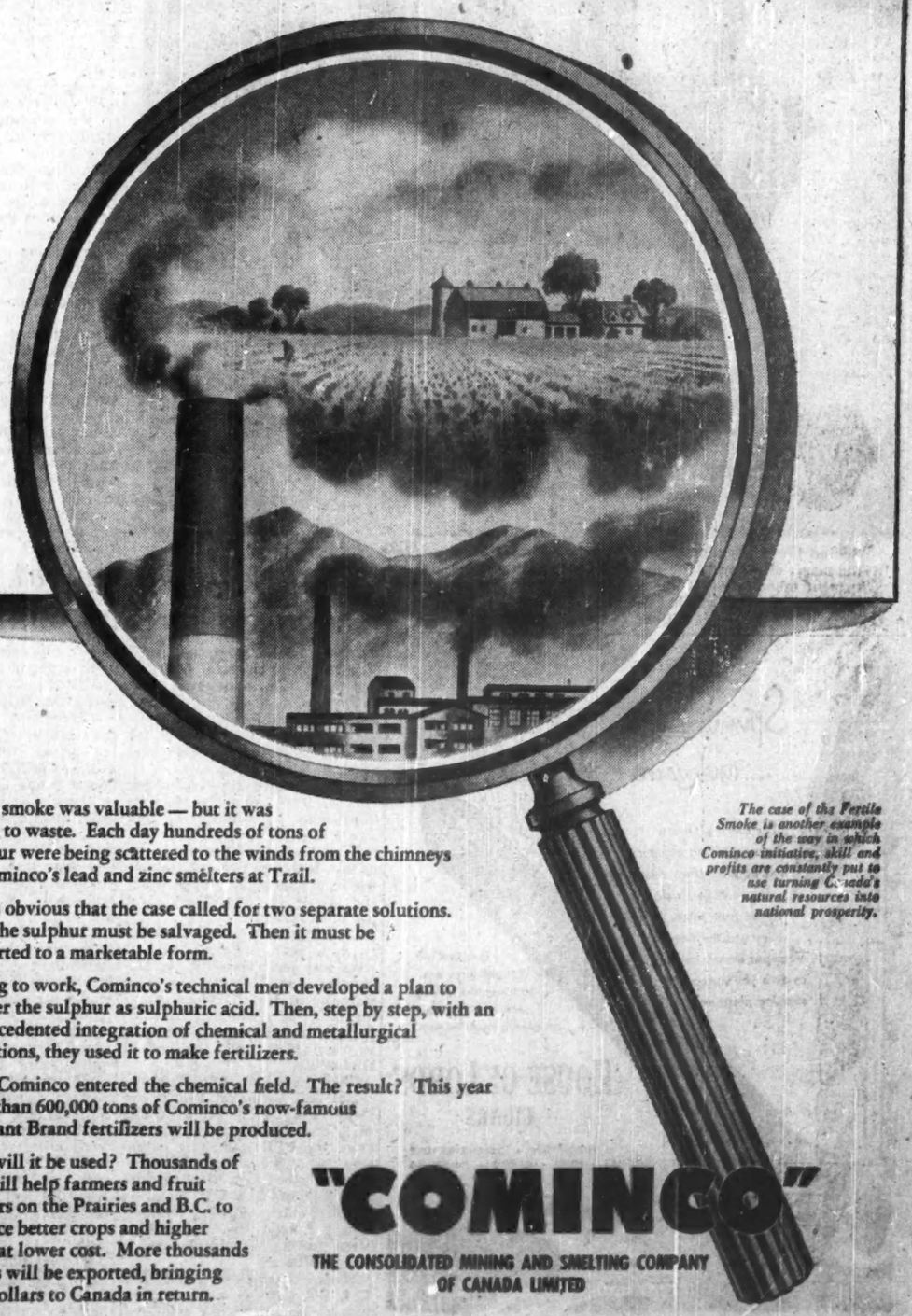
THE CASE OF

"THE FERTILE SMOKE"



The smoke was valuable — but it was going to waste. Each day hundreds of tons of sulphur were being scattered to the winds from the chimneys of Cominco's lead and zinc smelters at Trail.

It was obvious that the case called for two separate solutions. First the sulphur must be salvaged. Then it must be converted to a marketable form.

Setting to work, Cominco's technical men developed a plan to recover the sulphur as sulphuric acid. Then, step by step, with an unprecedented integration of chemical and metallurgical operations, they used it to make fertilizers.

Thus Cominco entered the chemical field. The result? This year more than 600,000 tons of Cominco's now-famous Elephant Brand fertilizers will be produced.

How will it be used? Thousands of tons will help farmers and fruit growers on the Prairies and B.C. to produce better crops and higher yields at lower cost. More thousands of tons will be exported, bringing back dollars to Canada in return.

The case of the Fertile Smoke is another example of the way in which Cominco initiative, skill and profits are constantly put to use turning Canada's natural resources into national prosperity.

"COMINCO"

THE CONSOLIDATED MINING AND SMELTING COMPANY OF CANADA LIMITED

Wide Range of Activity By NRC Men

Substantial Contribution To Industry In New Processes

The National Research Council at Ottawa makes a substantial and continuing contribution to Canada's industrial development and progress.

With a staff of 2,260, including 538 highly trained scientists and 770 non-professional technical staff, it operates laboratories in most of the major divisions of science and engineering. Its discoveries and improvements in processes are made readily available to Canadian industry through a Crown company, Canadian Patents and Development Ltd.

A recent announcement disclosed that a new method has been developed for prolonging the life of lubricating oils used in motor cars and other mechanical equipment.

By adding certain protective substances to the oil, or merely by inserting such materials in the oil filter, the oil can be protected from the effects of heat and air and thus made to last for a much longer time.

A new and better way of making water-repellent greases has been found and offered to industry. Lubricating greases are made by adding absorbent materials to oils, but some of these substances will take up water in preference to oil.

When such greases come into contact with water they gradually break down. To make a water-resistant grease the accepted way is to treat the absorbent material with a water repellent before mixing it with the oil.

In the N.R.C. process a small amount of drying oil is first added to the lubricating oil; then, when the absorbent material is added, it is picked up by the drying oil.

Heating the mixture fixes the water repellent coat and the grease becomes a water-resistant type.

Shrinkage Control

Studies on shrinkage control of woolen socks, undertaken for the Army, is resulting in the development of a new type in which 20 per cent of nylon is woven in with the wool. This prevents shrinkage of the socks in ordinary use and also increases their wearing qualities, especially at the heels and toes.

Heretofore millions of these woolen socks have had to be discarded after one or two washings because they became unwearable through felting shrinkage.

Aid has been given in the improvement of vision through airplane windscreens during rain by the development of a special method of treatment for the window that enables the pilot to see clearly even in the heaviest rains. Cases are on record where pilots claim their lives were saved by this means. Adaptation of the rain repellent to automobiles is being worked out.

Crystal-grinding techniques have yielded a method of making large single crystals of germanium which find use in the manufacture of transistors now extensively employed in the newer electronic equipment.

Corrosion studies are being carried on in co-operation with Central Mortgage and Housing Corp. with a view to reducing the losses through failure of domestic hot-water heaters.

In certain areas, hot-water tanks have a very short life because of the corrosive effect of the municipal water supplies. Corrosion losses in heating tanks and piping systems in commercial plants amount to very large sums each year.

Straw Fibreboard

At the Prairie Regional Laboratory, Saskatoon, Sask., utilization studies have led to the development of a process for the manufacture of fibreboards from wheat straw.

A recent modification of the process provides for the use of ground straw in the dry state with an added binder. Tests on the finished boards produced in the laboratory show that they have better resistance to water than some commercial building boards.

Results of food investigations carried out by the Council have found wide application in industry. Extensive use of dried eggs in wartime showed that a product suitable for consumption as an egg dish lacked the "lifting power" required for baking.

To improve the baking properties of dried eggs and thus maintain a postwar demand for this easily shipped product, the Council developed a so-called "sugar-egg" powder, that met the requirements of the baking trade. In the postwar years, over 30 million lb. of this product were exported to Britain.

Improved oiling procedures for preserving shell eggs have also been developed. One of these techniques has been approved by the Department of Agriculture and is now used in industry.

The oiling specifications were also adopted by the Ministry of Food in Britain for imports from other Commonwealth countries. Prewar shipments of shell eggs to Britain were negligible but Canadian exports reached a peak of over 19,400,000 dozen in 1948. This increase, and the present domestic consumption of over 10 million dozen oiled eggs per year, is directly related to the improved preservation procedure.

Broadening Wheat Use

A rapid and continuous method of separating wheat starch from the attendant gluten has been adopted in several Canadian plants mainly to obtain wheat starch for syrup production.

Additional information on research relating to the conversion of starch to syrup has been made available to industry. Pilot-plant studies have shown that wheat, barley, and sugar-beet molasses are suitable raw materials for the production by fermentation of butylene glycol useful for anti-freeze and as a base for the manufacture of other chemical products.

Aid has been given to the railways in improving the design of refrigerator cars for the transport of foods and fish. The newer types can be operated at around 5 deg. F., instead of the usual 10 deg. F., obtainable in ordinary salt-ice mixtures in the conventional-model car.

Some of the proposed modifications in car design are being incorporated in all new cars constructed by Canadian Pacific and Canadian National.

Three significant developments marked the work in building research during the year. A small Permafrost Research Station was established at Norman Wells, N.W.T. in co-operation with Imperial Oil Limited. A small laboratory has been set up and the first field investigation has been carried out as the beginning of a long-term program of study of permafrost and of foundations on permafrost.

Work has been pressed forward on the revision of the National Building Code, this work being done by the Division for the Associate Committee on the National Building Code. Twenty-nine Committees and Panels have been at work involving the voluntary contributions of over 200 architects, engineers, contractors and others interested in building. All the technical and secretarial work for the Committee is done within the Division. The revised Code will be available in printed form in this year.

Aircraft Research

The wind tunnels of the Division of Mechanical Engineering were used during the past year to provide the designers with information in connection with the design of the de Havilland Otter aircraft which is now flying and is one of the most successful aircraft of its type.

A high-speed wind tunnel was completed, installed and is now in operation; it is used primarily for the study of aircraft operation at speeds up to and in excess of the speed of sound.

The study of the icing of aircraft and engines and the development of means for their automatic protection was continued actively throughout the year, both in the laboratory and in the air. The RCAF North Star aircraft, specially equipped for this work, had a most successful year. Recently, on a three-day ice-seeking flight it accumulated a total of 28 inches of ice, not of course at one time.

An interesting study has been made, in the hydraulics laboratory, of the Fraser River in British Columbia. A model of the river was built and river-flow conditions were established as a preliminary step in the investigation of silting conditions in the navigation channel.

A larger model covering a longer section of the river has now been constructed and is in operation on a 3½-acre site on the campus of the University of British Columbia, where the climate permits open-air operation the year round.

The 450-foot model-testing basin was actively operated throughout the year. Models of lake freighters, ice breakers and other types of ships were tested, together with their propellers, for naval architects and shipbuilders.

In co-operation with engine manufacturers in the Maritimes a small semi-diesel marine engine for fishing boats, together with a variable pitch propeller, has been developed in the laboratories and three pilot models have been built, one of which is at present undergoing sea trials by a fisherman in Newfoundland while the other two have been made available to the manufacturers.

Maritime Laboratory

In addition to its laboratory operations at Ottawa and at the Prairie Regional Laboratory, Saskatoon, the National Research Council maintains a Maritime Regional Laboratory at Halifax, N.S., which was opened last summer.

One of the more important investigations in progress at this station concerns the industrial use of seaweeds, which are found in abundance along the East Coast, and are of great economic importance.

A substantial improvement has been made in the design of fog horns used in Canada. By the application of modern acoustical theory the horn has been redesigned resulting in its efficiency being raised from 0.2 per cent to 15 per cent. The new type is rugged and requires less servicing than former models.

Calibration of instruments by industry is done by several divisions of the laboratories, thus making it unnecessary to send such instruments out of Canada for verification.

A method has recently been developed for the colorimetry of bronze paints, difficult by ordinary methods because of their special type of surface. A new instrument, now covered by a patent application, measures the type of gloss known as "distinctness-of-image gloss," important to a number of industries.

Of no less importance to industry is the maintenance of the Canadian standards of luminous intensity, luminous flux and color temperature, and the calibrations of lamps which are made by comparison with them.

Radioactive Progress

Radioactive cobalt, or cobalt-60, made by Atomic Energy of Canada at Chalk River, is finding extensive use in place of radium in making industrial photographs. Methods for its measurement and use have been determined in the laboratories and made available to industry.

Iridium-192 is even more sensitive than cobalt-60. This isotope extends the range of gamma-ray radiography to sections much thinner than can be examined with radium or cobalt-60.

Sensitivity curves and exposure graphs have been prepared for industrial use. Some of the companies in Canada using these isotopes for radiography are Dominion Bridge Co., Montreal; Ontario Hydro-Electric Power Commission, Toronto; and Ford Motor Co., Windsor. Industrial applications of isotopes are being made on a consulting basis by commercial firms.

Application of radioactive isotopes was worked out to measure the flow of large quantities of pulp through a pump in a paper mill. Sodium-24 was chosen as the tracer because of its suitable gamma radiation and low health hazard. The process proved to be simple, effective, and economical.

A small low-cost shipborne radar set was developed for the use of merchant shipping. Because of its high-definition display and short minimum range, it is exceptionally well suited to navigation in restricted waters.

A Canadian manufacturer has produced a large number of merchant marine radar sets based on this design under a licensing agreement.

Microwave Lighthouse

A simple and inexpensive microwave aid to navigation, developed especially for the use of ships too small to justify the cost of installing radar, has been in operation at Halifax for the past two seasons.

The system comprises a microwave beacon transmitter ("Microwave Lighthouse") installed on shore, and a small receiver on board ship. The transmitting antenna provides an "on course" signal as narrow as one-quarter degree. By this means the navigator can maintain a fixed course accurately, or take bearings on the shore beacon from any position within the sector illuminated by the beason.

A beacon installation with omnidirectional transmissions has been made at Port Dover, on Lake Erie, as a navigational aid to local fishermen. Special receivers have been designed for use on the fishing craft. A licensing agreement to manufacture the microwave receiver has been made with a Canadian firm.

The radar detection range of buoys and channel markers is considerably enhanced by the addition of radar reflectors. A series of over-water measurements of the strength of radar signals returned by various types of reflectors was made to establish the maximum detection range of any type of reflector for a given height above the surface of the water. This work was done to assist the Department of Transport in developing reflectors of known service range.

The results warranted initial installation of buoys equipped with radar reflectors at Saint John, N.B., Digby, N.S., Halifax, N.S., and Father Point, Que. Numerous installations have been made elsewhere subsequently. In co-operation with the Department of Transport, radar reflectors for lighthouses have been designed and constructed. Installations have been made at two important lighthouses located on islands in the Great Lakes.

A microwave link was developed for remote control of the isolated fog-alarm station on Holland Rock, near Prince Rupert, B.C. Microwave frequencies are used because of high efficiency of microwave antennas, permitting the use of simpler receivers and eliminating interference.

Service to industry is always an important feature of the Council's work. The Technical Information Service, which has a field staff calling regularly at industrial plants in their respective areas across Canada, answered some 400 enquiries each month last year.

In all Divisions of the laboratories, attention is directed chiefly to problems that have some bearing on Canada's economic life, but in the conduct of these studies, many problems arise that are of fundamental interest in the promotion of scientific knowledge.

Research in pure science, therefore, occupies an important place in the program and serves to support the work in applied research.

Basic work adds to the sum of human knowledge; applied research enables one to improve processes or products by the application of known methods and principles. Both procedures are essential to the satisfactory operation of a research institution.

Provincial Research Work

(Continued from page 42)

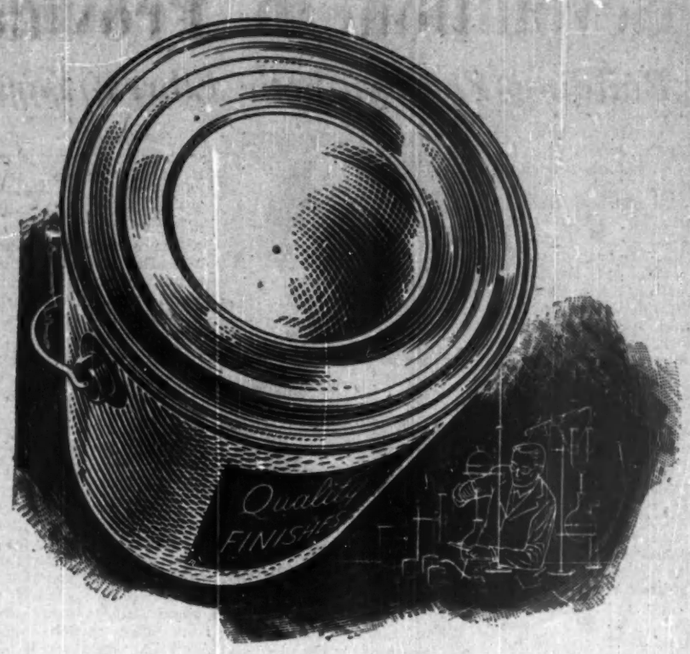
scholarship holders undertook special studies in entomology.

NOVA SCOTIA:

Chemical research of the Nova Scotia Research Foundation continues to centre on two major problems; utilization of seaweed products and the chemistry of coal combustion.

In the seaweed work, the hope is to interest establishment of a commercial operation in the province to process Irish Moss found plentifully along the shore. In addition work is being carried out in Halifax by the Maritime Regional Laboratory of the National Research Council of Canada, on the distribution and seasonal variation of the chemical components of seaweeds. Work is also being continued on fundamental studies to learn more about the chemical structure of the commercially useful extracts.

The study of the combustion properties of Nova Scotia coals is continuing. The principal purpose is the study of underground gasification and its possibilities in the province. Close touch is being maintained with work being done in this field in U. S., England, Belgium, France, etc.



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CASTINGS: FOUNDREZ powdered phenolic resins (for the shell molding process); FOUNDREZ liquid phenolic resins and FOUNDREZ core oils (for core binders).

FURNITURE, PLYWOOD, FLOORING, HARDBOARD AND CHIPBOARD: HYDROPHEN phenolic glues; PLYACIEN protein glues; PLYAMINE urea-formaldehyde glues; PLYOPHEN phenolic and resorcinol-formaldehyde glues.

LEATHER: BECKOSOL alkyd resins (for leather finishes); PLYOPHEN resorcinol-formaldehyde resins, SUPER-BECKACITE pure phenolic resins, SYNTHE-COPAL ester gums (for leather adhesives).

LINOLEUM: BECKOSOL alkyd resins and PENTACITE pentaerythritol resins (for linoleum coatings); RCI inorganic chemical pigment colors.

PAINTS, VARNISHES AND LACQUERS: BECKACITE (1) fumaric, (2) maleic and (3) modified phenolic resins; BECKAMINE urea-formaldehyde resins; BECKOLIN synthetic oils; BECKOPOL modified phenolic resins; BECKOSOL (1) phenolated, (2) phthalic-free, (3) resin modified, (4) pure drying and (5) pure non-drying alkyd resins; KOPOL processed Congo copals; PENTACITE pentaerythritol resins; STYRESOL styrenated alkyd resins; SUPER-BECKACITE pure phenolic resins; SYNTHE-COPAL ester gums; WALLKYD pure drying alkyd resins (for alkyd flat wall vehicles); WALLPOL vinyl-type copolymer latex emulsions (for latex flat wall coatings); RCI inorganic chemical pigment colors.

PAPER: BECKAMINE urea-formaldehyde resins (for adding wet strength, improving the wet rub of starch-clay coatings, and waterproofing starch adhesives); RCI inorganic chemical pigment colors (for paper coloring); STYRESOL styrenated alkyd resins (for paper coating).

PRINTING INKS: BECKACITE fumaric, maleic and modified phenolic resins; BECKOLIN synthetic oils; BECKOPOL modified phenolic resins; RCI inorganic chemical pigment colors.

TYPEWRITER RIBBONS: RCI inorganic chemical pigment colors.

WAXES AND POLISHES: BECKACITE modified maleic resins; SUPER-BECKACITE pure phenolic resins; SYNTHE-COPAL ester gums.

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Test-Tube Revolution In Textiles

Big New Plants Building For Synthetic Fibres, Yarns

More and more, the clothes we wear, the textiles associated with our day-to-day living, have their starting points in chemical plants.

Some of them are made from fibres which have emerged from the chemist's test-tube since the end of the war. Others are from fibres that were in the experimental stage when war broke out.

Together they go into some 25% of all the clothing and industrial cloth used on this continent and the proportion is growing every day.

This represents a tremendous new market for the chemical industry — particularly the petrochemical end of it, for many of the newer fibres, with exciting new properties, are produced from petroleum or natural gas.

Here are three of the more popular: polyethylene terephalate, polyacrylonitrile and polyhexamethylene adipamide. Maybe they are more recognizable by their shorter names — Dacron, Orlon and nylon.

$200 Million Investment

Canadian chemical and textile manufacturers are in pace with the leaders in this new textile revolution. Two new multi-million dollar plants being constructed less than 100 miles apart in Ontario will have the capacity to look after Canada's entire raw material requirements for nylon and "Terylene" — the U. K. version of Dacron.

By the time the Terylene plant is in complete operation, in 1955, there will be approximately $200 millions invested in plant and machinery for production of synthetic fibres and yarns in Canada.

Decision of the newly-formed Imperial Chemical Industries of Canada to build a Terylene plant in this country will mean a tremendous boost to the whole synthetic textile business here.

Not only will it assure the textile industry a liberal supply of a relatively new fibre but it will become a big consumer of some of the chemical products of the Canadian petrochemical industry.

I.C.I.'s new plant is being built at Millhaven, Ont. near Kingston. When completed it will occupy some 100 acres and will represent an investment of around $20 millions.

Early pilot plant operations will have a capacity of 700,000 lb. Initial operating capacity of main plant, to be completed in 1955, will be 11 million lb. At that time, some 1,000 people will be employed. Company is aiming at as flexible operations as possible until market has been developed.

Petroleum Base

Basic raw material is paraxylene — a petroleum product. I.C.I. will have to purchase this outside Canada at first but expect it to be available here within two or three years.

No decision has been made as yet whether to start from this basic par-xylene or from the intermediate step based on dimethyl teraphthalate. The D.M.T. is mixed with ethylene glycol — readily available in eastern Canada — under suitable conditions of temperature and pressure.

Then an ester interchange reaction is carried out followed immediately by a polymerization step with recovery of a portion of the ethylene glycol.

Terylene has an exceptionally low water absorption and therefore dries very rapidly. It also has a high melting point, high strength and high wear resistance. It stands up well under light, is mothproof and does not crease, but can be given a permanent heat set, pleat or crease.

It is resilient but stretches less than nylon. Its price will compare with nylon. It will go into a broad range of end uses from worsted yarns for suitings to silk-like yarn for underwear.

So far in Britain it has been used mainly by itself because of its versatility and the large variety of weights and finishes in which it can be produced.

The parent company Imperial Chemical Industries of London, Eng. own the rights in the basic patents for this new fibre, in all countries except the U. S. Pilot plant has been under way for some time in U. K. and output presently is at the rate of about one million pounds a year.

Dr. RICHARD BEECHING
Heads ICI's Canadian operation

Within another month or two, Canada's other big chemical plant (Canadian Industries Ltd.) for production of the intermediate materials to go into manufacture of nylon fibre and yarns will be going into operation at Maitland, Ont. near Brockville.

The plant will make Canada self-sufficient in adipic acid and hexamethylene-diamine, the basic raw material of nylon flake, heretofore all imported from the U. S.

The nylon spinning capacity at company's Kingston plant is being doubled to take the entire output of intermediates from the Maitland plant.

Consumption of nylon products in Canada has expanded sharply and C-I-L has had to expand operations at its Kingston plant several times to keep up to market requirements.

The other big project on the synthetic textile front is the $63 million combined chemical and textile plant of Canadian Chemical Co. nearing completion at Edmonton, Alta.

With starting raw materials of high alpha pulp from associated company's plant in B. C. and petroleum gases, the company will end up with a dozen or so industrial chemicals and cellulose acetate, acetate staple fibre and filament yarns.

Plan is to market most of the fibre and yarn in Canada and export a portion of the cellulose acetate. In one of the three plants nearing completion, acetic acid will be reacted with the wood pulp to form cellulose; in the third section, acetone and cellulose acetate will be used to manufacture acetate staple fibre and filament yarns. The other unit will turn out the industrial chemicals.

Installed equipment will be able to spin 10 million lb. of fibre and five million lbs. of yarns annually. The cellulose acetate section has been designed for a production rate of 25 million lb. annually, most of this to be used in yarn and fibre manufacturing. Contracts for sales of a substantial part of the new plant's production have been entered into with Celanese Corp. of America.

B. A. Oil Plant Will Reduce Grease Imports

Canada's grease manufacturing capacity has been increased by 15 million lb. annually by the opening of British American Oil Co.'s new modern grease plant at Clarkson, Ont. The added domestic production will reduce to a large degree importation of grease from U. S.

Costing around $1.5 million, the plant has the most advanced scientific and industrial features for pretesting and large-scale production of greases. From raw materials almost entirely of Canadian origin, the new B-A plant is producing a full range of greases to be distributed Canada-wide. Petroleum oils used in the process are supplied by B-A's Clarkson and Montreal East refineries.

Every batch of grease processed in the main plant is pretested in pilot plant. In this plant, which duplicates in miniature the equipment and processes of the main unit, the correct formulas and processes for all greases are developed in batches up to 400 lb. and guarantee highest grade production in the plant proper.

A full range of greases will be manufactured from a variety of fats and fatty acids, both saturated and unsaturated. These will be purchased in Canada according to rigid specifications. Naphthenic lube oils will be supplied by the company's Montreal East refinery and paraffinic lube oils from Clarkson refinery.

They Promote Plant Growth

Now they are feeding iron, copper, zinc, manganese, boron and molybdenum, back to the soil. But not in concentrations that will interest future prospectors.

The six mineral elements all considered essential to full plant growth are being fed back into the soil in the form of "fritted trace elements." They look like minute particles of glass and are expected to play an important role in Canada's agricultural future.

The elements are made by dissolving a mixture of the six trace elements by chemical action at a high temperature in a combination of glass-forming materials.

The resultant molten glass is shattered into millions of solid particles by being discharged suddenly into cold water. The particles are dry-ground into a fine powder.

While needed in much smaller quantities, trace elements are considered as vital to the growth of plant and animal tissues as nitrogen, phosphorus and potash.

They serve as catalysts or growth promoters. According to the manufacturers, these trace elements are slowly soluble so that they will not wash out of the soil. They will not react chemically to become "fixed" or unavailable to the plant and will not harm plant growth even when applied in excess. If the plant doesn't require them, they will remain in the soil for several seasons until needed.

These trace elements are manufactured by Ferro Enamels (Canada) Ltd. at Oakville, Ont. and will be distributed throughout Canada by the agricultural chemicals department of Canadian Industries Ltd.

Cornwall Growing As Chemical Centre; Site For 3 New Plants, Another On Way

Cornwall, Ont. is fast becoming an important chemical manufacturing centre. Some three new plants have either recently come into production or are about to start production. At least one other firm has purchased land and has plans for eventual construction of a plant.

The new plant of Howard & Sons (Canada) for manufacture of specialty chemicals will come into operation this August. Two of the chief products will be cyclohexanol and methylcyclohexanol which find their principal outlets in the textile industry. Company will also turn out ester plasticizers for use in the paint and plastic industries. A new fully-equipped research laboratory is also planned at Cornwall to study new techniques and devise the best formulations to meet customers' needs.

Choice of location was largely influenced by the availability of byproduct hydrogen of a good standard of purity from the Canadian Industries Ltd.'s electrolytic caustic plant. The location was also thought good because of likelihood of expansion in Cornwall and district if the St. Lawrence Seaway project goes through.

Effect of having the byproduct hydrogen readily available reduced considerably the initial capital cost of the plant. In England where the parent company operates, expensive hydrolytic cells have been installed to provide a source of pure hydrogen.

The methylcyclohexanol is a powerful solvent for oil, grease, pitch, waxes, etc., and an efficient wetting-out agent and emulsifier. As such, it is a valuable additive for the scouring process in textile operation, for soaps and any type of synthetic detergent. It is said also of great value in mercerizing, and as a dye solvent and penetrant.

The plant in its present form does not include units for ketone or resin manufacture, but has been laid out to provide for the incorporation of these at a later date if required, as well as the duplication of existing facilities. The rest of the plant is devoted to the manufacture of ester plasticizers. As well as the esterifier and ester washing unit, it incorporates a Tolhurst spinner and crystallizing units.

Phthalic and adipic esters will form the greater part of the production in the near future. The plant is flexible enough to permit a policy of following the trend of consumer requirements and producing those plasticizers most suitable to the developments of the paint and plastic industries.

TCF of Canada, Ltd., manufacturers of transparent cellulose film and other packaging materials, expect to get into initial operation shortly. Controlled by Courtaulds Ltd. of England, TCF will be the second domestic producer of transparent cellulose film. At Shawinigan Falls, Canadian Industries Ltd., produces the material under the Canadian trademark, Cellophane. Initial output will be at the rate of around seven million pounds.

Kemball, Bishop & Co. (Canada) was scheduled to come into initial operation at its Cornwall plant this spring with first Canadian output of citric acid. When production is completely under way the firm will be in a position to supply all Canada's citric acid needs.

Citric goes large to food and medicinal purposes. Previously much of the citric acid used in this country came from the worldwide parent company, with headquarters in England.

Charles Pfizer & Co. — manufacturer of antibiotics for pharmaceutical use and a broad range of chemicals for the food, pharmaceutical industries — has purchased a plant site in Cornwall with Canadian manufacture planned of a number of its best known products.

Quebec Keeps N.B. Hydro Hopes Alive

MONTREAL (Staff) — The Quebec Government has stated its willingness to co-operate with New Brunswick in developing the hydro potential of the Saint John River.

Quebec is being consulted prior to any final decision on the mammoth project, because some 2,700 sq. miles of the area drained by the Saint John are inside Quebec's borders. The necessary dam erections would cause flooding of part of Quebec's Temiscouata County.

The project, now under consideration by the International Joint Commission would involve harnessing an estimated 700,000 hp. from the 450-mile river at a cost of around $220 millions.

California Reader Writes

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